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ART. I. *Observations on the use of Tartar Emetic in Pneumonia.* By ALEXANDER M'CALL, M. D. of Nashville, Tennessee.

IN page 370 of the present volume some notice is taken of the "use of large doses of tartar emetic in pneumonia." In addition to what is there said, I will give my testimony in favour of the great utility of that medicine, in a form of pneumonic disease, which has frequently appeared in Tennessee.

I deem it the more necessary to excite some inquiry respecting this disease, from the diversity of treatment recommended by some of the most respectable physicians in the western states.

In the year 1815 this pneumonic affection made its approach into Kentucky from the north, spreading dismay and devastation in its progress. In the following winter, pursuing a southern course, the whole state of Tennessee fell under the influence of this dreaded scourge.

Hundreds of every age, employment, sex and condition, became victims to its violence. Many also were sacrificed

for the want of efficient remedial aid. Doubt, hesitation, and uncertainty accompanied most prescriptions.

Consultations served only to paralyze, distract, and mislead.

A few only were found to take that bold and decisive stand, which alone could arrest the progress of disease and death. It is in a state of things like this, physicians should have recourse to a rich fund of medical science and experience, relating to the diseases of the country in which they may reside. Such a stock of information can only be gathered from the contributions of many.

A hive of honey is collected, with much labour, from various flowers; and the queen of the overflowing comb guards and keeps the commonwealth for wintry wants.

So will the protecting spirit of medical literature preserve, for time of need, each fact or opinion that can conduce to lessening human woe, when death, in epidemic strides, shall again sweep over our western lands.

The immense extent of our fertile plains, vales, and mountains, covered with luxuriant vegetation;—the marshes, the lakes, and the rivers of our inland western states, leave no doubt that endemic and epidemic diseases must annually prevail in divers places, modified always by particular states of heat or cold, moisture or dryness, with various other necessary or accidental circumstances.

The cases I shall detail happened in February, 1821; at a time when pneumonic disease was sporadic, not epidemic, in the country; although, in the neighbourhood where these cases occurred, the complaint had the true endemic character. I was called to visit Mr. Leay's family, residents of Smith county, was informed that several of them were attacked with cold, plague, influenza, or pleurisy. On examination I found the disease to be a violent form of what has been termed pneumonia biliosa.

On a slight view of the several cases it was apparent Mrs. Leay's most called for immediate assistance. Her extremities were cold, face pallid, head thrown backwards, as in

hysteria; the pulse small, frequent, threaded, and fluttering; eyes half shut; the pupils turned upwards.

Tongue covered with a brown crust. Slight retching, and a greenish fluid running from the mouth.

Deglutition greatly impeded; voice inarticulate; and respiration very laborious and irregular.

I then learned she had been nearly in this condition for the last ten hours: That previous to getting so bad her bowels were opened by salts, and that, trying in vain to excite perspiration, she had taken a mixture of laudanum and elixir of vitriol to ease pain, by the direction of Mr. Richmond, a quack doctor.

A low muttering delirium attended. I could, therefore, get from my patient no information as it regarded her sensations, except that there was "something tearing and burning her vitals."

I ordered pediluvium and hip bath. In the mean time I gave a half portion of six grains of tartarized antimony in warm water. I informed the daughter of the dangerous situation I conceived her mother to be in, and stated to her that the system might sink under the operation of the remedy I was using; but that there was a probability of its proving highly beneficial. I determined on using tartar from the whole train of symptoms presented; and that knowledge every physician ought to have of the general *modus operandi* of this powerful medicine.

My patient was about fifty years of age; and even in younger persons, I had seen the abstraction of blood, in advanced stages of pneumonia, prove eventually fatal, though relieving immediate danger. I knew also that at a certain stage of extensive inflammation in dense membranous structures, so great a quantity of blood must be abstracted to make much impression on them, that general prostration of the system would be the consequence, before a healthy restorative action could be effected in the inflamed membranes. Besides, in my patient's case, nature was yet de-

manding, with all her feeble powers, an evacuation of the stomach.

In ten minutes after giving the first portion, I gave the other three grains and used the bath and frictions. No nausea complained of, pulse weaker, extremities colder, voice somewhat stronger and more articulate. Finding the retching checked, I commenced giving, in divided portions, ten other grains of tartar. It then appeared to me that most of the symptoms were rather owing to improper distribution of the fluids than to dissolution of the solids. I was, therefore, resolved to make a strong impression on the stomach. After such impressions, diseased actions are often directed into different channels, which, if continuing to act in a concentrated state on any one or two important organs, would soon incapacitate them from giving to, or receiving support from, appending structures. In the case before us it seemed evident that the great derangement of gastric and cerebral functions must keep the liver in a state of torpidity, and consequently the capillary and pulmonary circulation must be imperfect were it only from this source.

It was therefore to be expected that, if by this impression, the stomach were only relieved of its very offensive contents, a partial restoration of its functions would, at least, result; thereby removing one great source of irritation from the cerebral structure, as well as granting a respite to the neighbouring ganglionic nerves, to recover and regenerate their powers. The brain and stomach thus partially relieved, the liver could be aroused by calomel, by blisters, by warm applications and other remedies.

The circulation thus encouraged, capillary action would be the necessary result. From the centrifugal distribution of the blood, the lungs would derive benefit. The whole venous and lymphatic system would commence their respective absorbent offices. The secretory functions thus every where restored, mental vigour and health would be the consequence.

To effect these objects I thought it indispensable, as

above said, that the stomach should, in the first place, be freely evacuated.

With this view I gave the ten grains of tartar, and then one grain and fifteen of ipecacuanha.

She then vomited a tough fluid, by mouthfuls, of a greenish colour, and the consistency of the yolk of an egg. Muco-purulent matter having a white, and sometimes a straw colour, sinking in water, was also discharged in considerable quantities. This last had also streaks of red blood and a grumous dark fluid intermingled with it. Vomited seven or eight times, two hours having elapsed since the first portion was given.

Observing cold sweats and very weak pulse, I gave some paregoric, two grains of camphor, and one quarter of a grain of opium in succession.

The same evening warm applications, the cretaceous mixture, blisters to the wrists, rubefacients to the ancles, and enemeta were used.

Rest for two hours and an anodyne. Alvine evacuations, and soon after gentle sleep; the first in the last forty-eight hours.

Next morning gave ten grains calomel, followed by senna and neutral salts. The skin dry and hot around the chest; moist on the extremities.

I then applied a blister over the epigastric region, and gave some senna and salts with a small portion of antimonial wine; purging green vitiated bile, sometimes black and of the consistence of tar. Next morning free expectoration mixed with some blood.

Administered cretaceous mixture to check a retching; diluent warm drinks, and a dose of castor oil. The day ensuing, wine and barks, in small portions, were taken. Her convalescence was slow.

Mr. Leay, aged about fifty-five, had been attacked so severely, he could not, without assistance, walk a few steps to his bed. He complained, at first, of violent pain in the head and back, and an indescribable sensation of wretchedness,

for want of breath, and by reason of the tearing and burning that seemed to be inside of him. He was bled one pint, before I saw him, and took some salts. His pulse was hard, frequent, small, and chorded. His nose had a remarkable sharpness, which I afterwards discovered was mostly natural.

His tongue was covered with a brown crust, except round the edges and end which were smooth, dry, and red. Great thirst, skin hot and parched, with a peculiar disagreeable feel to the touch. Urine scanty and high coloured; bowels constipated; wild delirium, with a frequent assurance, on his part, that he must die. Complained very much of a burning at his stomach. I gave, every two hours, powders composed of five grains calomel, two of nitre, and one and a half of tartar. In ten hours bowels freely opened, with the aid of enemata. In the mean time gum arabic in solution, and some epsom salts had been taken. The discharges offensive, dark, and muco-purulent with whitish fibres intermingled, but without much bile, either that which might have been long in the intestines or lately secreted. I had expected much bile to be evacuated. His eyes and skin, however, showed the liver had failed to perform its office on the blood to the proper extent.

I applied a large blister over the stomach, and continued the nauseating medicines during the day ensuing. Pediluvium, senna and salts, and the free use of warm teas were also employed. Keeping his bowels freely open with calomel, tartarized antimony, and nitre, with occasional doses of magnesia and oil, his system was in a few days in a condition to receive the advantages of a tonic plan of treatment. His recovery was speedy.

William Leay, aged, perhaps, eighteen, of full habit, had been attacked with severe pain in the chest, coughing, and spitting blood; the stomach much deranged. He had been bled twice before I saw him, and had taken some purgative medicines. I prescribed calomel, nauseating doses of tartar, and squills. Afterwards lac ammoniac and slippery elm tea.

For some time the bowels were kept laxative with calomel and oleum ricini. No tonic remedies were used, as I was fearful some visceral obstruction had occurred for the want of more free early depletion. A cough and hæmoptysis harassed him for some time.

Mrs. Hearn, daughter of Mr. Leay, resident one mile from his house, was severely attacked. I early saw this case.

The pulse indicated congestion of the brain or some of the important viscera. Rigors, cold extremities, pain between the shoulders, along the spine, the back of the head, and much difficulty of breathing attended.

I used warm applications and abstracted twenty ounces of blood. Soon after finding re-action in the system had taken place, I deemed it perfectly safe to exhibit a free vomit. The tongue indicated much gastric derangement.

I therefore gave eight grains of tartar emetic in divided doses, which produced copious discharges of green vitiated bile. Arterial action somewhat increased, and the pulse more open. Shortly after, alvine evacuations. Next day, bowels constipated. Enemata administered; chilliness complained of, though the skin on the body was very hot; high fever, delirium, difficulty of breathing, while she persisted in the belief that she must immediately die.

Antimonials given in free doses, and twelve ounces of blood drawn. A large blister applied round the lower and front part of the chest. In the evening slight remissions of pain, but the fever and delirium continued. In the morning used salts and senna with one portion of calomel; also five grain doses of ipecacuanha to produce nausea.

Some expectorants advised, and keeping the bowels open with castor oil. The pain and spitting blood much abated. Two days after, found strangury from the blister had occurred; abdomen sore to the touch and much distended.

Warm fomentations used, and she drank copiously of infusion of watermelon seed.

In half an hour, an abundant discharge of high coloured

urine, which filled the room with a very strong odour of Spanish flies.

By one of the attendants I was asked whether Spanish flies could get into the bladder from a blister. This evacuation seemed to be a complete crisis to the disease. She soon recovered.

A servant girl, at Mr. Leay's, attacked in the same way; bled her twelve ounces. Bilious secretion vitiated and scanty; gave calomel in large doses at first, afterwards in small portions. A large blister applied on the side most painful. The day ensuing, some bleeding at the nose; nitro-antimonial powders freely used. Expectoration plentiful, but often mixed with blood. Bowels kept laxative for some days by using senna and salts. This was not so violent an attack as any one of the others described, although, at first, the symptoms appeared the same. The attack would have been still lighter if she had taken an emetic or had lost more blood. Her recovery was not tedious; her age about sixteen years.

Phillis, a negro woman of Mr. Leay's, aged about fifty, severely attacked with chills, cold perspiration, and pain seated as before-mentioned.

Pediluvium and an application of a large blister over the stomach and side, the first remedies used. Bled sixteen ounces, and found the blister had drawn, before complete reaction had taken place. Next, a copious dilution of the bowels with weak senna tea, containing antimonial wine and spirits of nitre, which produced an active purging of bilious matter.

Following day gave calomel and jalap; at night, spiritus mindereri with pediluvium.

Pain relieved; quick recovery.

One mile from Mr. Leay's I visited Mrs. Boon, aged about sixty, and labouring under pneumonic disease. After an attentive examination of her case, it was my opinion she would die under any plan of treatment. I, however,

bled her twelve ounces, used warm fomentations, and the bath.

Then exhibited fifteen grains ipecacuanha and two of tartar at one time, which immediately operated as a puke.

Applied a blister over the epigastrium.

There seemed to be an inactive state of the biliary functions. I therefore directed fifteen grains calomel to be given next morning, and left some antimonial powders. The following evening, when I next saw her, I could not perceive much change.

Abstracted eight ounces blood; continued the powders; directed flannel, frictions, and free use of diluent drinks. Tonic medicines were soon after given; her convalescence was very slow.

Many other cases of a similar character occurred in this vicinage. Several persons also died, but none that came under my care. John L. Wynne, M. D. who was then my partner in the practice, saw the above described cases, and suggested many of the remedies prescribed.

He also highly approved of the antimonial practice I had pursued. In conversing about it I do not recollect that either of us thought there was any thing new or remarkable in the practice. We looked on it, in the light, that we were applying to the plain indications of the disease, those principles which every student ought to learn from the common text books of the schools.

It will be remarked, that in the above treatment the principal remedy depended on was tartarized antimony; while bleeding, calomel, and other remedies were brought in as indispensable auxiliaries. The prescriptions were constantly suited to the symptoms of each case. In every instance we were careful to avoid exciting ptyalism, under an impression that when this disease yields to salivation it might have been cured by other means.

The antimonial plan of treating the disease demands, however, much more strongly the close observing eye and discriminating judgment of the practitioner, than the method

of cure, in which the chief reliance is placed on the lancet and ptyalism. In the epidemic of 1816, Samuel Hogg, M. D. one of the most distinguished practitioners of the western country, had the most unexampled success by mainly treating the disease with the use of the lancet and calomel.

From the great practical knowledge this accurate observer and experienced physician has of this disease, he justly owes the medical public a paper on that subject.

By such timely publications medical men can be better prepared to pass, at once, a proper judgment on communications such as that inserted below. It was addressed to our citizens, in 1816, during the prevalence of the epidemic to which it has reference.

Emanating from one who had grown up with the population of this new country, it was printed in the public papers, obtaining rapid and extensive circulation. The publication alluded to appeared in the Nashville Whig, February 6th, 1816, as follows:

Messieurs NORVELLS,

Grievously affected by the distresses of our fellow citizens, by the prevalence of influenza amongst us, I feel myself prompted, by duty, to communicate to the public, through the medium of your paper, the result of my experience in the treatment of this epidemic or contagious cough; and which has been suggested by study, reflection, much observation, and the soundest reasoning on the subject. That the epidemic, or contagious cough, is the influenza described by Rush, Sydenham, and others, cannot be denied by any men of reading and observation. To these authors I therefore refer practitioners for their information and further satisfaction; while I submit, or rather urge, to the people the following treatment of the influenza and its concomitant diseases amongst us, with full assurance that they will be able to check the progress of disease and death in the country. The following are the causes to which, I think, the mortality may be ascribed.

In the first place, not adverting to the controlling power of its influence over all other diseased states of the human body.

2dly. To letting too much blood, or drawing no blood.

3dly. To the use of calomel or mercury.

4thly. To the indiscriminate application of warm fomentations to the body and limbs, and the irrational and injudicious administration of hot toddy, while the controlling diseased actions from the epidemic was influencing the concomitant diseases, or such as were paying their homage to it.

GENERAL MODE OF TREATMENT.

Let all those attacked with symptoms of the prevailing epidemic be bled to one half pint if there be pain or fever. If no pain or fever be present, draw no blood. Soon after letting blood, or if bleeding be omitted, proceed to administer salts in the following manner, viz: dissolve two ounces of Glauber, Epsom, or Rochelle salts in three half pints of warm water. Add to the water, boiling, one quarter of an ounce of fennel, dill, or anise-seed, or a small handful of peppermint, of which let an adult take a gill every hour until the bowels are well purged; then use a gill once in three hours for three days; children to use less in proportion to their ages.

Drink, after the salts, liberally of flaxseed tea or barley tea, mallow, sage, or hysop tea, with a little honey, or sugar and vinegar. If the stomach should be sick or inclined to vomit, or the head much disordered, add a little tartar emetic to the first portion of salts. If the head or breast be pained, apply a blister or mustard seed to the back, and bathe the feet twice a day in warm water until a free perspiration comes on; use no calomel or mercury, in any form, except at the close of the disease, when three or four grains may be given with rhubarb, if there be yellowness of the skin and eyes, or any other mark of liver affection. If the symptoms should not be much palliated after

opening the bowels, use thirty or forty drops of hartshorn, in whey or vinegar, every two or three hours. Use a light and temperate diet after the above treatment; if the pulse should be very low and weak and the fever heat removed, then use a little wine and water, or very weak toddy may be allowed if the patient be aged or infirm, or accustomed to the use of wine or ardent spirits.

Let the confidence of our fellow citizens be reposed in the above mode of treatment, and let them pursue strictly and rigidly the directions given above, and they will continue to experience such palliation and relief as no other method of treatment has offered to this widely spreading epidemic, which appears to be almost co-extensive with the atmosphere in its contagious influence. With ardent hopes for relief to our fellow men from their present distresses of mind and body, let us unite in imploring the aid of Heaven.

(Signed)

JOHN NEWMAN.

February 6th, 1816.

ART. II. *Hints on Melancholy.* By Dr. GEO. R. PITTS, Member of the Philadelphia Medical Society—of Westmoreland county, (Va.)

AMONG the numerous calamities by which society is afflicted, those immediately connected with the mind should have the greatest claim on the attention and sympathy of physicians. Prostrating that noble faculty by which man is so eminently characterised from all animated nature, the unfortunate victims of mental disease exhibit the most appalling spectacle of human wretchedness. The pathology of corporeal diseases (except such as are directly connected with the nervous system) has advanced so rapidly within the last century, that those of an acute character, are met at their onset by the physician with zeal, resolution, and composure.

Not so with those of the mind. Their pathology is yet in its infancy, and will probably ever remain entangled in an impenetrable web of doubt and incertitude. There is indeed no basis upon which the edifice of investigation can be raised. Post mortem examinations throw little or no light upon their real character; and our barometers and thermometers are here useless instruments of inquiry.

Melancholy, the disease on which I wish to make a few observations, has been but slightly noticed by medical writers; and whenever mentioned, its symptoms have been so blended with those of mania, hypochondriasis, dyspepsia, and chronic hepatitis, that the reader finds it impossible to draw a line of demarcation between them. Melancholy, in my opinion, is a disease *sui generis*, independent *at its onset* of any other in the catalogue of nosology. It differs as essentially from mania, as typhus differs from inflammatory fever—one being a disease of low, and the other of high intellectual action. The attacks also of melancholy are slow, gradual, and sometimes almost imperceptible; the complexion is pale, the countenance haggard and cast down, the pulse is weak and quick, and the whole animal system exhibits a state of extreme imbecility and languor. The attacks of mania, on the other hand, are sudden and violent, prostrating at once all the powers of the mind; the face is flushed, the countenance raised and commanding, the pulse is strong and active, and the whole animal system betrays a state of phlogistic diathesis, requiring the most prompt and rigorous depletion. It is singular that these diseases should have been identified by medical writers, because the mind is the seat of both. Diseases constitutionally different, have their seat in the same part of the body. It may be said, however, that they often terminate in each other. This is certainly a fact. But it goes no further to prove them the same disease, than to say that sphacelus is inflammation, that phthisis is catarrh, or that hydrothorax is peripneumony. The disease generally called hypochondriasis, in my opinion, is nothing more than a symptom of an advanced or aggravated

stage of the one under consideration ; the morbid influence of the mind being communicated to the liver, producing there induration and scirrhusity ; but more frequently to the stomach, indicated in that organ by impaired appetite and digestion, acid, or oily eructations, &c. I have seen instances of dyspepsia or chronic hepatitis, unaccompanied with any symptom indicative of intellectual disorder ; and whenever such symptom is manifested, I am disposed to think that it may be attributed, and can be traced, to an original disease of the mind itself.*

There is such a close and inseparable connection between body and mind, in both health and disease, that it is beyond the reach of man (by the light of philosophy at least) to tell when one begins and the other ends ; the morbid action of corporeal diseases is communicated to the mind, and vice versa. It is not my business to define what mind is—it is sufficient for my purpose to say, that I can form no idea of a substance independent of its properties ; that I believe there is nothing in the mind but what arrived through the medium of the senses ; and that the striking difference between the minds of men is attributable to the force of example and influence of education.

CAUSES OF MELANCHOLY.

These are, the proximate, remote, and exciting. The proximate cause of melancholy is mental debility. The remote causes act upon the mind through the medium of the nervous system ; the most prominent are intemperance in eating, the immoderate use of ardent spirit, opium, or tobacco, fatigue, loss of sleep, excessive venery, and above all indolence. The exciting causes operate upon the mind through the medium of its passions ; the most prominent

* My observations have been but few, and I hope the attention of physicians will be devoted more fully to this highly interesting subject. There are many unequivocal instances of mental disease originating from functional derangement of the body.

are debt, the loss or ingratitude of friends, disappointed hope, wounded pride, unanticipated misfortune, unexpected prosperity, long continued exertion of the mind, and an increased love of money or fame. If some persons are more predisposed to attacks of melancholy than others, they are such as are of sensibility acute and tender, and of imagination lively and luxuriant; philosophers and poets being more especially its victims.* The disease certainly multiplies in proportion as society becomes intelligent and enlightened. It is rarely to be seen among the labouring part of the community; and it is a fact too important to be passed over in silence, that in all my diligent observations and inquiries, I have not seen or heard of a solitary case of this disease among the negroes of this state. The cause of their entire exemption from a malady so prominent and deplorable in enlightened society, is to my mind obvious and explanatory, and is alone attributable to the manner in which they are reared. Destitute of education, their feelings are almost entirely of the sensual kind; for a large majority of them are strangers to both moral and intellectual pleasure and pain. Accustomed to labour from their childhood, it is made agreeable by habit. Certain of the *real necessities*† of life, they are never plagued by the desire of such as are imaginary: having never enjoyed the sweets of liberty, they form no idea of its charms: the temple of honour and wealth being for ever closed against them, they have neither avarice nor ambition: they form their own notions of moral rectitude, and with them polygamy is no crime, and jealousy a stranger. I should like to know if this disease is ever to be met with among the savages of this country; I am induced however to suppose that it never is. Women are less subject to melancholy than men, in the proportion of one of the former to at least six of the latter. This striking disparity

* Dr. Johnson, Goldsmith, Swift, Watts, Smollett, Rousseau, Voltaire, Curran, Lord Byron, &c.

† Dr. Franklin makes these consist in food, drink, habitation, fuel, and cloathing.

is owing to the habits of women being much more regular and temperate than those of men. I am induced to doubt, however, whether women enjoy the greatest share of intellectual serenity and independence; for hysteria, a disease arising from uterine derangement, entails upon the mind consequences as sad and deplorable as melancholy itself.

SYMPTOMS OF MELANCHOLY.

These despend *entirely* upon its exciting causes, and are so numerous and diversified, that it would be almost impossible to collect and represent them all. The first stage is usually marked by great depression of the animal spirits, indicated by langour, apathy, and extreme aversion to locomotion—there is usually added grief, fear, irresolution, anxiety, or jealousy. As the disease advances, the patient generally becomes misanthropic, and withdraws from all intercourse with society. His imagination usurps a dominion over his judgment. He believes there is some secret enemy, who is bent on his destruction, or that he is labouring under some dreadful disease, from which he can never recover. And with regard to such feeling and apprehensions, he entertains such an implicit belief as always to be displeased at any attempt to dissuade him from his error. The complexion is pale and sallow, the countenance wan and dejected, his affliction is made evident by perpetual taciturnity, excessive weeping, watchfulness, and extreme timidity. The increased morbid action is often communicated to many of the physical functions; but more especially to the organs of the hypochondrium, indicated by hepatic obstructions, impaired appetite and digestion, constipation, &c. Life is now a heavy burden to the unhappy sufferer, and in a state of despair, he either terminates his afflictions by suicide, or sinks into idiotism.

CURE OF MELANCHOLY.

Upon this part of the subject I have little to say, in addition to what is recommended by medical writers for the cure of hypochondriasis, dyspepsia, and chronic hepatitis.

From what has already been said, it would appear that melancholy is not necessarily coeval with intellectual organization, but is rather the result of pernicious habits and improper education. It would require more time than I intended to devote to these sketches, to illustrate this position, in a manner that might be considered satisfactory and decisive.* I will therefore refer the reader to the causes of this disease, and proceed to what I consider the only rational mode of treatment. Melancholy being a disease of mental debility, two indications immediately present themselves to the physician.

1st. To remove, or mitigate the causes, which serve to continue and aggravate the disease. 2dly. To produce in the mind a train of ideas incompatible with and stronger than those of the disease, and to impart tone and action to the mind itself.

The first indication will be answered by a diligent inquiry into the habits of the patient, and if found to be irregular and intemperate, it will be absolutely necessary to convince him at once of the only resource, upon which he can rely for happiness and hope. That he must fly as the most dangerous foe, the haunts and habits of dissipation, the midnight revel and bewitching bowl. That he must at once retrace the footsteps by which he has estrayed from the simplicity of nature, and confine himself within the path of prudence and sobriety. Should the combined co-operation of friends and physicians fail in accomplishing this object, the case may at once be yielded as desperate and incurable.

The second indication will be answered by diverting the attention of the patient from his feelings and situation. The association of his ideas must be changed by an entire removal from every object connected with the cause of his disease. Agreeable, cheerful society, travelling, music, read-

* How many persons are driven to melancholy by the the most sordid and selfish of all passions, avarice—a passion universally the result of example and education.

ing, (never however upon medical subjects,) are best calculated to effect this object. Tone and action can be imparted to the mind through the medium of the body.* Temperance and exercise are the engines by which this object is to be accomplished. I cannot recommend too highly the great importance of exercise in the treatment of melancholy. It abstracts the mind from the pains of recollection, the disappointments of hope, and the miseries of dependence. I here see the necessity of drawing these hints to a close. For this subject, when considered in a moral and metaphysical point of view, presents an extensive field for the researches of the philosopher and the divine. I cannot conclude, however, without the hope, that some person of talents and opportunity will undertake and render the subject the justice it so conspicuously deserves.

ART. III. *A case of Femoral Aneurism, spontaneously cured by a rupture of its Sac.* Communicated by Dr. ROBERT ARCHER, of Norfolk, Virginia.

THE circumstances attending the progress and termination of the following case, were in their nature so remarkable and extraordinary, that I conceive its fair and impartial record, will not be unacceptable to the readers of this Journal.

Petro Valentine, an Italian, in the 61st year of his age, of a strong and vigorous constitution, but worn down with age, indigence and a dissolute life, having been eight or ten times severely afflicted with venereal disease, by profession a soldier, but for several years past travelling through the country as a showman, and carrying his box upon his shoulders, was attacked with jaundice, at the same time ex-

* See an introductory lecture by Dr. Rush, on the effects of physical causes upon the intellectual faculty.

perienicing considerable inconvenience from an increasing weakness and pain of the left leg, and on the 7th May, 1820, requested medical assistance.

The jaundice readily yielded to the ordinary remedies, but his system continued in a very low, debilitated and emaciated state, rendered more and more insupportable from the diseased condition of the leg, which had assumed a sallow and doughy appearance, from the thigh downwards, and about the ankle and foot was considerably œdematous.

Upon close examination, a flat circumscribed tumour, about an inch or inch and a half in diameter, was visible about the middle of the thigh, on the inner side of the sartorius muscle, and immediately over the femoral artery. The pulsation of the tumour was not only perceptible to the touch, but to the sight, and corresponded with the pulse at the wrist; its contents were fluid and yielded to pressure, but immediately resumed its original size when the pressure was removed; and it did not appear to be materially affected whether it was applied above or below it.

From the patient's account, he first perceived it about two months previously to this, and it had very gradually attained its present size. He was not conscious of having received any injury about the part, or of having made any violent or sudden exertion whereby he might have contracted the disease.

The physician in attendance requested a consultation, to which I was invited, and from the well marked pathognomonic symptoms that were exhibited, I unhesitatingly pronounced it to be a case of true femoral aneurism, and was gratified with the accordance of the other gentlemen with me.

In consideration of the age and extreme infirmity of the patient, it was thought inadvisable to perform the operation at that time. The tumour was moderately compressed by means of a roller acting upon a piece of lead, and the part was bathed in vinegar and water, and covered with ice.

Under this treatment the tumour evidently increased, and

the appearance of the leg became more unfavourable : it was now considerably swoln, the œdema was extending upwards, and his health rapidly declining. In this state of things the operation was the only resource left the surgeon; and although the chances of success were as nothing when compared with those of its failure, yet the bare possibility of saving the patient's life, was a sufficient inducement to risk it, and it was accordingly determined on, to be performed after the method recommended by Hunter.

The next day, being the 20th of May, was appointed for the operation, but about 2 o'clock, P. M. on the 19th the patient experienced an instantaneous and violent pain in the knee, attended with considerable noise, proceeding from the rupture of the tumour. An immediate distention of the whole limb ensued, accompanied with an extensive ecchymosis from the glutei muscles inclusively, down to the knee, giving it a dark livid colour; the tumour had entirely disappeared.

This is a correct history of the disease to the time of the rupture of the sac, when, judging from analogy in like cases, we might naturally have expected a termination of the man's existence; but the event was still more unexpected, and I may also say anomalous.

The patient was much debilitated by the extravasation of blood, and complained very considerably of tension of the thigh; his pulse very feeble and his spirits depressed. A compress and bandage were applied tolerably tight over the seat of the former tumour, and the limb bathed with tincture of camphor.

This treatment was continued for several days; on the third day, the sugilation appeared to be diminished and the thigh was evidently smaller, the patient's health too was improving; and finally, on the 20th day after the rupture, the swelling and ecchymosis had so far subsided, as to permit him to walk about the room, and in a month more he was enabled to follow his usual avocation.

Such was the termination of this interesting case; and

the question that naturally suggests itself, is, "was it an aneurism?" At its first presentation we might possibly be induced to say it was not: but the symptoms attending its commencement and progress, and the many cases recorded by surgical authors, of aneurisms spontaneously cured, although not attended with all the circumstances of this, justify the opinion, that it was. It is much to be regretted, however, that the gentleman who had the immediate charge of the patient did not inform himself whether the circulation was continued through the artery, or was arrested by its obliteration. As I understand no symptoms indicative of its suspension were apparent, I think it will not be taking too much for granted to say it was not.

Valsalva's mode of curing internal aneurisms, which has been so ably portrayed and so successfully followed by Pelletan, afford strong evidence of the possibility of the operation. Copious and repeated bleeding and abstemious diet, were the remedies which they employed; for by these the *vis a tergo* was so much diminished as to enable the sac to resist its pressure, and even to contract and totally to disappear. Why may not the same diminution of the *vis a tergo* in the present instance, effected not by bleeding, but by old age, abstemiousness, and long indisposition, have permitted the obliteration of the orifice of the ruptured vessel, more especially when aided by compression on the part, and enveloped by hard coagula; for it is well known that aneurisms have been cured, by the mere pressure of the aneurismal sac upon the parietes of the vessel, and there remains but little doubt on my mind, of the probability of the orifice in the femoral artery in the present case being closed by the same means, particularly when a wedge of this coagulum might have been inserted into the bleeding orifice. In confirmation of this idea, we have the authority of Van Swieten, Haller, Petit, and Foubert; Scarpa has observed the same thing, and Doctor Jones, in his valuable work on Hæmorrhage, also states, that a wound in an artery may be healed through the intervention of a

clot of blood, and the circulation still continue through the artery.

No doubt can be entertained of the fact, that aneurisms are cured by a spontaneous process of nature. To deny this would be to deny the authority of the most eminent men of the profession; but the means that nature employs to effect this end, are not so well determined. Valsalva, Benjamin Bell, and others have demonstrated, that the artery *most frequently* becomes impervious in case of aneurism spontaneously cured, by the agglutination of its sides by adhesive inflammation. Abernethy relates the case of a soldier at the York Hospital, who had an aneurism of the femoral artery that was spontaneously cured by the sloughing of the integuments and coagulation of the blood contained within the sac. According to Cooper, Paoli relates a similar termination of a popliteal aneurism; Desault, upon opening a patient in whom a spontaneous cure of popliteal aneurism was just commencing, found a hard bloody thrombus, which extended for three fingers breadth within the artery, above the sac, and was so firm as to resist injections.*

These are cases, in which the obliteration of the artery was the immediate cause of the cure of the aneurism; but that it sometimes takes place, and the circulation continues through the artery, I think the evidence adduced, is sufficient to prove.

However sceptical Samuel Cooper may be as to the truth of this assertion as a general rule, he is nevertheless obliged to acknowledge that it is the fact, as respects those aneu-

* Van Swieten, in his commentaries on Boerhaave, Par. 161, relates a singular instance of a peasant, who received a wound in the axilla from a knife by which the axillary artery was divided, and who was supposed to have died of hemorrhage. On the following day however, when the inquest or jury had assembled to examine the body, some symptoms of life remained, and he ultimately recovered. The learned commentator concludes the case with this salutary observation: "Si ergo in tam magna arteria, et cordi adeo vicina, potuit fieri consolidatio, apparet non tam facile desperandum esse etiam in periculogissimis vulneribus arteriarum."

risms of the aorta, that have been cured. He says, "notwithstanding aneurisms cannot be cured, as Scarpa has explained, unless the artery be rendered impervious for some extent above and below the tumour, I believe we must make an exception to this observation with respect to those few aneurisms of the aorta, (especially those of its arch) which, according to the records of surgery, have been diminished and cured by Valsalva's method. In such examples we are not to suppose that the aorta becomes obliterated at its very beginning, but that the diminution of the quantity of circulating blood, the reduced impetus of this fluid, the lessened distention of the aneurismal sac, the general weakness induced in the constitution, and the increased activity of the lymphatic system, all necessary effects of Valsalva's method, have combined to bring about a partial subsidence of the tumour."

Now, if an aneurism occurring in the largest artery of the body; an artery which is the source and trunk from which every other one proceeds, with the exception of those of the pulmonary system, and which receives, especially at its arch, the undivided impetus of the whole action of the heart, can be cured by these causes resulting from Valsalva's practice, why may not the same means be produced, not by depletion and abstemious diet, but by natural causes, as evinced in the case of our patient, be productive of the same salutary end, in curing an aneurism in an artery, which in the most vigorous constitution cannot be subjected to the same pressure and distention that the aorta experiences in the most debilitated frame. For the aggregate capacity of the arteries of the body is greater than that of the aorta, and consequently, by hydraulic laws, the blood must pass with less velocity through them, and cannot exert the same action or impetus against their sides: besides, the coats of the small vessels are thicker and stronger than are those of the larger, in proportion to their respective diameters.

It may next be asked, might not all these symptoms have attended a dilatation and rupture of the crural veins? We

cannot deny that a tumour of the vein in that place may have been accompanied with pulsations from its contiguity to the femoral artery. Samuel Cooper relates several interesting cases of pulsatory tumours which were not aneurismal, and they frequently occur in practice ; it is equally true that an extensive ecchymosis would have been the consequence of its rupture : but it is not probable that it would have been as instantaneous and extensive as in the present instance, nor that it would have produced such exquisite pain as to have caused the patient to feel as if his leg were forcibly torn from his thigh, and to have produced a report which he compared to the discharge of a pistol.

Whatever may have been the nature of the disease, its consequence we well know, and it is not the less surprising, that an extravasation of the blood as considerable as this must have been, should in so short a time have been completely absorbed without inflammation and suppuration, and that the patient 60 years of age should have been restored to health and enabled to pursue his usual laborious avocation.

My opinion, and I express it with confidence, is, that it was a case of true aneurism, produced, remotely from a diseased state of the femoral artery, and perhaps of the whole arterial system, and immediately from the weight and exertion that necessarily attended his carrying on his shoulders and walking with a heavy box : and I think I am somewhat fortified in this opinion from the circumstance of his previous ill health and infirmities, having been eight or ten times afflicted with syphilis, and probably not always professionally attended ; and the abuse of mercury has long been considered, as one of the predisposing causes of aneurism.

ART. IV. *On the use of the Actæa Racemosa in Phthisis Pulmonalis.* By Dr. T. S. GARDEN, of Charlotte, (Va.)

WITH a view to the advancement of medical literature, and of science in general, aided by a desire to contribute all in my power to the diminution of human misery, I am induced through the medium of the Recorder, to communicate to its patrons, as well as to all scientific establishments and lovers of learning, the result of my experience and observation with the *Actæa Racemosa* or Rattle weed, in *Phthisis Pulmonalis*. The only account we have of this plant is to be found in Barton's collection of the indigenous articles of the United States, classed under the head astringents. It delights in broken, rocky situations, remarkable for fertility of the soil, hence the vulgar name rich weed, by which it is readily recognized, by most of the planters, farmers, and old women of our country, and on this account I shall pass over its botanical characters. It may not be superfluous to notice its resemblance to the *conium maculatum*, in its immature state, but when fully matured, may be very readily distinguished, by its lofty towering stem, which emanates from the body of the plant, and seems to be a continuation of the stalk.

I am probably the only physician, who has ever used it in his own person, or who has any knowledge of its virtues and effects in disease, except those in my immediate section of country. This medicine has been in common use with the vulgar, in many parts of the western country, for some time past as a remedy, and I have for a considerable time, laboured under a conviction of its efficacy, from actual experiment upon my own person: I have however delayed giving it publicity until other evidence could be adduced, lest I should be thought the boasted discoverer of a remedy, which had no claim to merit except in the imagination of its inventor. I design merely to state

facts which can be supported by the testimony of those physicians, who were acquainted with my own situation, and of those gentlemen who in conjunction with me have witnessed its effects upon others. I can ascribe the degree of health, which I enjoy at present, to nothing but the use of this medicine, aided by suitable regimen; and nothing but utter despair and entire extinction of all hope of recovery, together with a want of confidence in all others, induced me upon the bare testimony of vulgar report to hazard the experiment. In a short time my estimation of its virtues were greatly increased, and the expectations which had been excited of its ultimate success were finally realized. Shortly after commencing the use of this medicine, the hectic paroxysms, which had attended me for some time previous, were entirely checked, the nocturnal evacuations from the surface of the body, to which persons affected with phthisis are subject in the secondary stages, began to diminish, the expectoration of a fluid from the vessels of the lungs and bronchia, resembling pus in appearance, was speedily arrested; the cough became much less troublesome and less frequent—my pulse, which for some time before had never been lower than from 100 to 120 pulsations to the minute, was reduced to the medium standard; the pain in my right breast and side left me, my strength and appetite began to improve, and I speedily abandoned the use of all medicines, or any other means, except attention to regimen and exercise. A period of twelve months or more had elapsed, from my primitive ill health to using this medicine, during which time I had bled freely and copiously, kept up a constant discharge from the surface of my breast, by the use of blisters, setons, &c. and adhered strictly to a vegetable regimen, but without any relief.

It was the opinion of the celebrated Dr. Rush, that if there existed a remedy for hectic fever, it was a tonic, and that it belonged to the vegetable kingdom, and such is evidently the nature of the *actæa racemosa*. Like the *digitalis* it disorders the sensorium, and operates in a powerful

manner upon the secreting and absorbent systems. When exhibited in a full dose, it prostrates in a distressing degree, producing nausea, vertigo, pains of the extremities, anxiety, dilatation of the pupil, quick small pulse, with universal restlessness and uneasiness. These effects are immediate and transitory. Its ultimate and remote operation is the converse of the above. It is this which gives it the supremacy over all other medicines of the same class. The digitalis induces a reduction of arterial action, at too great an expence of the general powers of the system, to be applicable to those cases wherein this medicine seems to be so admirably calculated to be productive of benefit. It is a paradox in medicine, and in whatever way it may be experienced, it certainly possesses the power in an eminent degree of lessening arterial action and at the same time imparting tone and energy to the general system. This like, many other phenomena relating to the science of medicine, will for some time to come be clouded in doubt and obscurity. I was induced at one time to ascribe much of its efficacy to its influence over the secretions of the hepatic system, since, in my own case, there was great derangement of the functions of the liver and stomach, and might strictly be denominated a case of gastro-hepatic, or dyspeptic phthisis; and such I believe to be the fact with regard to the greater number of those affections, called pulmonary. Perhaps a truly pulmonary affection does not exist, one time in an hundred, but upon strict inquiry, and minute examination into the history of the disease, its origin may be traced to gastric or hepatic derangement, perhaps to both. Subsequent experience and observation, have however convinced me of its efficacy, in cases purely pulmonary. In the month of April, 1821, I was requested to see Mr. J. F. a young gentleman, then confined to his bed of a pulmonary disease. To use his own language, he said, "he had taken cold a few days before, which affected his stomach and had given him a bad cough." I ascertained upon inquiry, that he had been troubled with pulmonic symptoms, at intervals, for

some months previous to my visit, though in a milder form. He seemed to be perfectly unconscious of his situation or his danger. His debility, when I first visited him, rendered him unable to turn in bed, without assistance, nor was it possible for me on a hasty visit, to pronounce with certainty as to his real situation; not suspecting however that ulceration had taken place, I left him not much concerned about his future fate: Having advised venesection to be repeated frequently, I left some mercurial powders, with a small portion of tart. emet., and a blister to be applied to the chest. On my second visit, I discovered he was discharging pus very freely. I had then no doubt as to the scrophulous nature of his disease, and communicated my idea of his situation to his friends, who suggested the propriety of a consultation; accordingly the day following, Dr. May of Mecklinburg, met me at the house. We were both of opinion upon further investigation and examination that it was a case of tubercular phthisis. We ordered frequent bleedings, for which there existed a strong indication, a constant irritation to be kept up by means of setons, blisters, and tart. emet. plasters, his bowels to be kept open, and confined him strictly to a vegetable regimen. This plan was pursued rigorously for some time without any relief or even amendment. I finally suggested to Dr. May my experience with the *actæa racemosa*, also the propriety of making trial of it in Mr. F.'s case, to which he did not object. I then spoke to his friends upon the subject, expressing at the same time the small hope I entertained of his recovery, and my great confidence in this remedy. Upon being informed of it, the young gentleman was anxious to give it a trial, accordingly he commenced its use immediately, but neither myself nor the attending physician would be responsible for the consequences; neither would prescribe it. In a short time we had the gratification to witness the happy effects, resulting from his temerity and fortitude. The effect was prompt and decisive. His pulse was greatly diminished in frequency and force, in three days time; his

cough and expectoration lessened rapidly, his strength improved daily, and in the short space of two or three weeks, he was able to walk abroad without any assistance whatever. He has remained entirely free from any disease of the lungs to the present time, and his general health continued to improve until a few weeks past, at which time he requested my advice, as to the nature and management of a tumour, situated on the right side of the neck. It had made its appearance a few weeks before, and had become stationary, indolent, and void of pain. Supposing it to be likewise of scrophulous character, I advised leeches, tart. emet. plasters, poultices, &c. It soon suppurated, was readily healed, and he is again flattered with the pleasing prospect of speedily enjoying good health. I have advised the use of the *actæa racemosa*, in other cases, but those described are the only ones, which have been equally happy in the result. Its want of success in two other cases I am confident was owing to the irregular manner in which it was used, together with imprudence and intemperance on the part of the patient. The criterion by which I am governed in its exhibition are its effects upon the head. An ounce or two of the tincture prepared from the root may be administered once or twice a day, to most patients with safety. Its dose however, like all other medicines, must be regulated by the varying circumstances of the case and situation of the patient, as to age, constitution, habits of body, &c.

Experience and observation have convinced me of the fallibility in the operation and effects of all medicines; this probably possesses less ambiguity of character, and is less equivocal in its operation, than most others of the same class.

ART. V. *Peruvian Balsam in Gangrene.* By Dr. ROBERT ARCHER, of Norfolk, (Va.)

A LETTER of Dr. Ainslie's,* published in the Courier of 28th December, setting forth his invaluable discovery of the efficacy of Peruvian Balsam in the cure of gangrene, has gone the rounds of our newspapers on this side the Atlantic. That the idea is original with the Doctor, I have no doubt he conscientiously believes, and I have no desire to take from him the credit he is justly entitled to for extending the benefits of a remedy, which I agree with him has been too much neglected.

But the progress of science can never be impeded by the investigation of truth; and candour compels me to say, that the powers of the remedy in question were publicly proclaimed and highly extolled, twelve years ago, by my preceptor, who was in the constant practice of using it in cases of gangrene, and which practice has been as constantly pursued, not only by myself, but by another of his pupils, to the present day.

Nor did the idea originate with him. The Peruvian balsam was a favourite remedy with the ancients, and constituted a principal ingredient in many of their most approved vulnerary applications, for instance the Balsam of Locatelli. Boerhaave and Van Swieten both recommend it "humores effusos a putridine preservare."† Hoffman, in his chapter on Sphacelus, treating of this, with other remedies which he proposes, says, "uthac ratione putredo arceatur, et quod mortuum est, sejungatur."‡ In another place he advises it be given internally,§ to strengthen the system and counteract the effects of mortification.

In my own practice, I have used it with the most decided

* The Doctor's first account was published in the Asiatic Journal.

† Commentaries, par. 204.—Mat. Medica, same No.

‡ Medicinæ Rationalis, par. 2.

§ Ibid. par. 6.

advantage. I find it particularly applicable where ill-conditioned, sloughing ulcers of the extremities, attended with gangrenous symptoms which so often resist every curative means, and which may justly be esteemed one of the "*opprobria medicorum*." In a case of this character occurring on the tibia of an old man of 50 or 60 years of age, the application of the Peruvian balsam to the part, as warm as it could be borne, arrested a gangrene which had extended two inches beyond the ulcer. The man is now alive, and enjoys good health.

ART. VI. *A case of Puerperal Fever, treated by Spirits of Turpentine.* Communicated by Dr. JAMES H. LUCAS, of Madison, (Geo.)

ON the 15th July, I was called to a woman who had been delivered five days before of her third child, after a protracted and lingering labour of two days and nights. When I saw her, there was a wildness of expression, great anxiety, with a considerable sharpness of the features. Her pulse ranged from 100 to 110. She had severe pain above the eyes, a hot, dry skin, and great restlessness; the tongue furred in the middle, and of a red appearance on the edges. She had considerable tenderness of the belly, with an appearance like a ball over the pubes. Her bowels were costive; her extremities were cold every morning about two or three o'clock, with a scarcity of the lochial discharge: the restlessness was also much more troublesome in the afternoon. The child and placenta were both delivered as usual. As a preparatory means, ten grains of calomel were prescribed, to be worked off with castor oil. This brought away several very dark green fetid stools, which she said relieved her considerably, particularly her head. The next morning, the 16th, I ordered her to take two tea spoonfuls of spirits of turpentine, in a solution of gum arabic, or beaten up

with the white of an egg, with a table spoonful of castor oil in the evening, to assist the operation of the turpentine. On the 17th, the tenderness of the belly had in a measure subsided; the pulse less frequent; and four more green stools, of a very offensive smell from the oil and turpentine, were voided—She was ordered to continue the prescription. On the 18th, the tenderness was nearly gone, except on pressure: the pulse was ninety strokes in the minute. Three stools had been voided, and of a less offensive smell, and but slightly tinged with green.—The skin was much cooler than the day preceding.—The prescription was still continued. On the 19th, the pulse was natural, with a slight perspiration on the surface; the tenderness of the belly was entirely gone; the lochial discharge of its proper quantity and colour; five stools had been voided, the two last were of a natural appearance; and her appetite was good. On the 20th, I found her up, and sitting in an easy chair, quite cheerful, and perfectly free from fever or disease, and has continued so ever since.

The result of this case has left no doubt on my mind, that spirits of turpentine will become as justly entitled to rank as a specific in this disease, as Peruvian bark in intermittent fever.

ART. VII. *A case of Puerperal Convulsions.* Communicated by Dr. JAMES H. LUCAS, of Madison, (Geo.)

CASE. Mrs. R——, aged thirty-eight years, and pregnant with her ninth child, and advanced to eight months and a half, was on the 25th of December last, taken with a violent pain in the right side of the head, accompanied with giddiness, tingling of the ears, and blindness when she stooped. These symptoms increased. A dose of calomel and jalap was administered; it operated slightly, and produced severe salivation. On the 27th I was called in, and found her in

convulsions, which had commenced at eleven o'clock the preceding evening, continuing with little or no intermission. During the intervals she had a fixed and vacant stare, with a shrill, hoarse, sonorous breathing, loud enough to be heard throughout the room. These symptoms continued until ten o'clock, on the night of the 27th, lasting each time from one to two and three minutes, the longest interval in the first twelve hours being twenty-seven minutes. They made their appearance first with a twitching of the right arm, side, thigh, and leg, drawing the body in the shape of a bow, a livid appearance of the face sometimes approaching to black, protrusion of the tongue between the teeth, with a discharge of bloody froth from the mouth, and a cold clammy perspiration. Her pulse was strong and full, though as to frequency natural. She had lost the use of the right arm, side, thigh, and leg, and her extremities were cold. On my arrival, several hours after the commencement of the convulsions, her situation was alarming. Supposing the disease to be dependant on a congestive state of the blood-vessels of the brain, from the strength and fulness of the pulse, I determined to use venesection largely, and to carry it to as great an extent as I could, consistent with the strength and safety of the patient. After removing every thing tight about the head, neck, or breast, and raising her head and shoulders, twenty-four ounces were taken, with little or no perceptible effect on the fulness or hardness of the pulse : the bleeding was continued, and cupping-glasses were applied to the temples, until she lost seventy ounces. This quantity was taken principally from the arm, at intervals, as the symptoms became more or less alarming, except six ounces by cupping. The last bleeding was performed before the fit had entirely gone off, and caused it to return with more violence than any I had seen her have ; in fact I thought her once dead—but to my surprise and pleasure she soon opened her eyes. I made several attempts to get blood from the temporal arteries and jugular veins, though without effect. Her head was shaved ; a blister covering the head and the nape of the

neck, and two others were applied to the inside of the thighs—injections also were administered, as she was unable to take any medicine by the mouth. In the early stage an examination was made per vaginam, to discover if there was any enlargement of the os tinæ, and what effect, if any, was produced on the uterus by the convulsions. Finding that the labour had not at all advanced, I determined to wait with patience the result of the case, rather than be guilty of imprudence or rashness in endeavouring to deliver her, unless the convulsions became more severe, and there was a disposition to bring on labour. These however gradually subsided into slight twitchings, which lasted for several hours, particularly in her right side. On the next evening, I discovered, from her complaints of uneasiness and sense of bearing down, that labour had or was commenced. On examination, I found my apprehensions were correct, and from the relaxed state of the parts, that one or two pains would be alone necessary to effect it. I succeeded in delivering her of a dead child, seventeen hours and thirty-eight minutes after the cessation of the convulsions. The placenta was uncommonly small, thin and shrivelled, and of a much paler colour than usual. It was not until after her delivery, that she complained so sensibly of the loss of the use of the right arm, side, thigh and leg, and of the numbness and coldness of the right foot. These were, however, soon partially restored, by the application of mustard plasters, frequently moved so as to redden the whole surface, assisted by spirits of turpentine and essence of mustard. For several days after her delivery, the lochial discharge was smaller in quantity, the face was flushed, and she complained of a numb, sore pain in the head, which were relieved by cupping, castor oil and mild enemas, and a tea of mentha pulegium, with directions to be particular in her diet. Mrs. R—— is now perfectly well.

ART. VIII. *On the use of Alcohol in the disease produced by the bite of the Rattlesnake.* By WILLIAM MAYRANT, Esq. formerly Member of Congress.—Communicated by Professor PARSONS.

IN September three years ago, one evening at my residence on the Hills of Santee, I heard a violent scream from a female at no great distance. In about from seven to ten minutes I was called out, and informed that Essex, a male slave, was bit by a rattlesnake, and was dead or dying. They had brought him to the house, and on going out I found him extended motionless and speechless, his jaws locked, with a very feeble fluttering, and scarcely perceptible pulse. Humanity as well as interest dictated to me every exertion to relieve him. I had heard of the successful use of spirits, both among the whites and the Indians in this affection. Calculating from the rapid effects of the poison upon the system, that it must act on the nerves, and having seen a child about 8 or 9 years of age, take in typhus near a bottle of Madeira wine in a short time with benefit, I determined to try the effect of the strongest stimulants I could command. I therefore mixed near a teaspoonful of red pepper, finely pounded, in a glass of whiskey, had his jaws opened, and poured it down his throat. In a very short time it was rejected, as were three or four others in succession. I still persevered, finding the pulse a little revived. After the fourth glass it remained on the stomach; the pulse shortly after improved, and after getting five or six glasses to remain, I ceased giving any more, until the pulse fell very fast, nay almost ceased beating. I then commenced again in pouring down the spirits and pepper, until it revived. Apprehensive that the quantity of stimulants would destroy him, I soon discovered that on ceasing the stimulants, the pulse would sink. After taking more than a quart he spoke in his native tongue to his countrymen, a copious stool soon followed: the pulse still fluctuated;

the spirits were again administered, till the pulse became steady; the dose and frequency of the article being regulated by its effects. In about two hours the pulse was so strong that we left him in care of the attendants, with strict injunctions to renew the stimulants whenever they found it necessary. In the morning, the patient was pretty well recovered, but in a state of considerable debility. I continued through the day giving every hour, hartshorn in moderate doses, also spirits and water, with nourishing food. There were in the course of the night three quarts of spirits used; one quart of which may have been wasted in pouring it down his throat. On examining the wounds when first brought to me, I found the two marks of the teeth, from an inch to an inch and a half apart, which shews that the snake must have been of uncommon size. I observed no swelling about the part bitten; the parts under the jaws and about the throat, were however so much tumefied, that I was apprehensive the passage to the stomach would be closed.—I applied to the wound and swelling under the throat, a paste of slack lime and soap; under the idea that the poison was an acid, and that the alkali might attract and neutralise it. Most of the flesh from under the jaw where the swelling was mortified, fell out, and around the wound larger than a dollar sloughed away. They in a short time however healed by poultices and washes of the decoction of red oak bark. The person who was bitten, said that as soon as he felt the wound he took a rail from a fence near him to kill the snake, which was a very large one; his strength however failed, he could not use the rail nor make any exertion whatever; being asked why he did not call for assistance, he says he felt as if his tongue and all around his throat was so tied up that he could not speak. He was found in a few minutes by the overseer of the plantation leaning on the fence and puking violently. In the morning he had no recollection of being brought to the house, or what we had been doing for him.

CASE 2. The year after I was called late in the night

to relieve a negro that had been bitten by a rattlesnake; he was in great pain about the breast, and puking a green fluid. Spirits and green pepper were given him in repeated doses of a wine-glass full, until the pulse returned. The pains abated; after the man had taken six glasses of pepper and spirits he was much better; the puking ceased, and the pains abated; he recovered by the use of a quart in ten or twelve hours.

CASE 3. Relating these cases to a friend who had lately returned from Rio Janeiro after a residence of thirteen years, he informed me that the serpents there were very poisonous; that death sometimes ensued in fifteen minutes, unless remedies were applied; that the natives stewed herbs, with which they effected a cure; but as they were always infused in spirits, it was thought by a physician of eminence there, that the spirits performed the cure. An instance was mentioned of a man who was found with one of these most poisonous snakes on him and biting him repeatedly; the snake was killed; the man taken to the house to all appearance dead; after a while he came to himself, and was perfectly well, unhurt from the poison. It seems by the testimony of the other servants he had left the house in a state of intoxication, and had probably fell upon the snake; the stimulant no doubt counteracted the poison.

REMARK.

There is a remarkable coincidence in this case with one published two years since, in the *National Intelligencer*, by Dr. Ramsey, in which large doses of brandy and opium were used with complete success.

ART. IX. *Two cases of Puerperal Convulsions.* Communicated by ENNALLS MARTIN, M. D. Easton, Maryland.

IN November, 1797, I was called on to visit a poor woman in labour, and convulsions. Depletion was indicated

by the latter circumstance as well as by a full bounding pulse, to which the women present made no objection. I accordingly tied up her arm, and took away a very large portion of blood, which was not less than $\frac{3}{4}$ xxx. without making the least alteration in her pulse, as to size or frequency, while the convulsions recurred at very short and repeated intervals. Waiting with some degree of impatience for fifteen or twenty minutes, I proposed a second bleeding, which was violently objected to, on the presumption, that the first had done no good, inasmuch as the fits, as they were called, were more violent; but insisting on it, I was permitted to tie up the arm again. As soon as sufficient compression was made on the veins, the blood gushed out with great impetuosity from the orifice, which had been before made, but before $\frac{3}{4}$ xx. had been taken the convulsions returned with great violence, which increased the fears of the women; and no persuasion, which I could use, could convince them, that the loss of so much blood could be the means of finally putting a stop to them. Being fully satisfied, that nothing else could save the life of the poor woman, I was determined to use no other remedy, and therefore left her, though not without insisting on a third bleeding, which their clamours prevented me from carrying into effect. In the course of the day she died, without being delivered of her child. The result of this distressing case excited no little regret as well as mortification. I was so well satisfied from a consideration of this case that it is more laudable in a physician to run the risk of shortening the duration of life, than to suffer the patient to die of a violent disease, that I was determined, if such another case should occur, nothing short of resistance from friends should prevent me from going all lengths, particularly where my opinions were so decided, as in the case of this poor woman.

In March following, 1798, I was called to visit a black woman, a slave of a gentleman of this neighbourhood, who was in labour, but before I could see her, she was delivered of three children, all alive. When I arrived I found her

as well as is common on such occasions without a single complaint. I staid only a short time before I left her, but before I could have got home she was taken with convulsions, as the servant was with me in less than half a hour after my arrival, with a request that I would return as quick as possible, as Eve was taken with fits soon after I had left her. I made all possible haste, and got there a little after dark. The convulsions were exceedingly violent, and the arterial excitement, if possible, surpassing that of the poor woman just mentioned. Now I met with no opposition from any quarter, because the lochia had suddenly stopped, and all the women were fully satisfied, that, "*they had got up into the head.*" Finding myself at full liberty to bleed ad libitum, I hastened to open a vein. The blood gushed out with great impetuosity from a large orifice, filling a vessel which held at least ℥xxiv. in a few minutes. Perhaps I should have taken more, if the vessel had been larger, because not the least alteration was made in the size, or frequency of the pulse, while the blood was rushing from the vein, of a very highly florid colour. The blood was scarcely stopped, before the spasms recurred with rather redoubled violence, which was an inducement, together with the fulness of the pulse, to wait but a short time before I a second time tied up the arm, when the blood again flowed like a torrent from the same orifice, and filled the bowl as quickly as in the first instance, and without making the least alteration in the state of the pulse as before, while the convulsions were equally disposed to recur with the same violence. Determined to give the woman a chance for life at all hazards, I continued drawing off nearly the same quantity of blood every twenty minutes or thereabouts, until I had tied up the arm the fifth time, the blood flowing at each time with equal impetuosity, but before the bowl was half full the pulse began to moderate and calm down, losing that thumping violence, which had been raging for some three or four hours. In fact, it had sunk so much, and the blood having suddenly put on a less florid appearance, that I began

to fear that a collapse of the system had or was about to take place. I therefore as soon as possible for the fifth time closed the orifice, from which not less than $\frac{3}{4}$ cxx. of blood had run off in about two hours. I went several times to see my patient before late bed-time, and always found her in a calm, pleasant sleep, with a pulse as soft and moderate as in good health. She never awoke during the whole night, and when I saw her in the morning with some fears, I was gratified beyond measure to find her as I had left her the preceding night, just having awoke perfectly herself as to mind! the lochia had returned, and every symptom as favourable as possible. In fact, she could not have been better after an ordinary labour, and her confinement was of as short duration. She is still alive, and had within some few years afterwards four other children at three births.

After a lapse of twenty-five years, I offer these cases for publication in the Medical Recorder. During which time I have not met, nor heard of a case of equal violence by many degrees, though I have had occasion to carry the use of the lancet to great extent, until the epidemic of 1813 made its appearance, which literally gave a *death blow* to the depleting system. However, within the last two or three years venesection has been again successful in some degree, and, no doubt, will be as useful as at any other period as soon as this epidemic constitution of the atmosphere has passed away. That there are revolutions going forwards in the atmosphere every forty or fifty years, which change the nature of all kinds of fever, I have not the least doubt, and that that change proceeds from the effect of the air on the blood I have as little, notwithstanding the imposing experiments of Messrs. Allen and Pæpys. As yet, though the lancet in many cases has become essential, I have not seen the blood flow with rapidity from the orifice and of a florid colour, as it was accustomed to do before the epidemic. I am persuaded that the old order of things will gradually take place, when few inflammatory diseases will be cured without the use of the lancet.

[The following case was recorded by the author in his thesis. By Dr. Physick in his lectures, it was doubted, and Dr. Dorsey, in his *Elements of Surgery*, also discredited it. Without intending any reflection on these gentlemen for their want of faith, it is now presented to the public, written from notes, with some variation of language perhaps, from the account first given. The substance, however, is the same. The physicians who were concerned in the operation are all well known, and of high respectability in the state of Maryland.]

ART. X. *Case of Fracture of the Cranium.* By WILLIAM HAMMOND, M. D. of Hagerstown, Maryland.

CASE.—John Wardle, aged 14, was thrown from a horse on the 9th June 1808; Drs. Dorsey, of Hagerstown, Maryland, Hanenkampf, and myself saw him shortly after the accident, and we found him nearly in a lifeless state. The scalp, though entirely detached from the cranium on the side of the injury, was not lacerated or wounded, but much distended with effused blood. A crucial incision was made by Dr. Dorsey, through the integuments, when more than a pound of extravasated blood was poured out. The nature of the injury was now fully ascertained. It proved to be a fracture of the anterior inferior angle of the parietal, a part of the frontal, together with all the squamous plate and part of the zygomatic process of the temporal bones; the fracture also extended into the external meatus. The integuments were separated by the knife from the superior margin of the external meatus to enable the operator to get at and remove a fractured and detached piece of the pars petrosa. All the squamous plate, a part of the petrous portion, about a fourth of the superior circumference of the external meatus, with a considerable part of the zygoma of the temporal bone, together with the fractured and depressed portions of the parietal and frontal bones, were removed. A splinter from the temporal bone was driven through the dura mater into the brain, and

divided the median artery of that membrane. The flow of blood was profuse during the operation, and was more so when over. Several attempts to apply a ligature to the wounded vessel proved unsuccessful; recourse was then had to compression, which also failed: And as the blood flowed fast from the wound, some decisive step to arrest its progress was demanded.

Death was certain from the continuance of the hemorrhage, it was therefore concluded to enclose the artery with a ligature as the only resource; this was done by Dr. D. by passing an armed needle through the dura mater, around the artery and out upon the other side, including about three fourths of an inch of brain, dura mater and artery.

The operation succeeded: The bleeding ceased; the ends of the ligature were brought out through the incision of the scalp, and the wound was dressed in the usual way. On the 13th day from the operation, the ligature was removed with the dressing.

Our patient laid for many days in an insensible, and I might say almost in a lifeless state; high fever supervened and continued for twelve or fifteen days with delirium, but the free use of the lancet and cathartics finally triumphed. The faculties of his mind were not injured, and when I last heard of him, he had gained considerable celebrity as well as ingenuity as a mechanic, and after twelve or fourteen years lost his life by an accident.

ART. XI. *An Historical Essay on the state of the Medical Sciences during the last six months.*

(From the London Medical and Physical Journal, July 1823.)

ANATOMY (NATURAL) AND PHYSIOLOGY.

Human Anatomy, for obvious reasons, very rarely presents any new discovery.—Some well-marked instances of

the multiplication of parts, as the pectoralis, glutei, and other muscles, have been recorded by Dr. TIEDMANN;* and a more uncommon and important phenomenon, described by the same physiologist, is the occasional existence of a double sexual system in the female, consisting of two vaginae, each connected with a separate uterus, capable of impregnation independent of the other. These cases, to which we have already referred, (Number for June,) are rather to be regarded as monstrosities, than as coming under the department either of Natural or Morbid Anatomy: they are of importance, however, as affording a new and apparently satisfactory explanation of some of the cases of superfœtation, which rest on authority too unequivocal to admit of doubt.

Anatomy (comparative).—A peculiar arrangement of the venous system has been described by Dr. JACOBSON, in the "Isis of Oken," a German periodical publication of some note. In man, and other mammiferous animals, all the veins, with the exception of the vena portarum, are arranged so as to form a single system, which collects the blood returning from the various parts of the body, and conveys it to the heart. The vena cava in this class is formed by the veins from the lower and posterior parts meeting, so as to form one common trunk, which runs directly to the right auricle. Dr. Jacobson has shewn that this arrangement does not extend to other vertebral animals; and he describes a new set of veins which is not directly connected with the general venous system, but which conveys the blood coming from the middle or posterior parts to the kidneys or liver. This arrangement obtains in birds, reptiles, and fishes, being subject to three modifications.

"The first modification, which is to be esteemed the prototype of the rest, exhibits the following form. From the skin and muscles of the middle part of the body branches arise,

* Med.-Chirurg. Zeitung.

which form several trunks, passing separately to the kidneys, in the substance of which they again divide into branches, and are there variously distributed.

“In the second modification, the veins which return from the posterior part of the body are received into this separate system, of which we are treating. The caudal vein, which brings back the blood from the skin and muscles of the posterior part of the body, divides into two branches, which, having received some veins returning from the middle part of the body, flow to the kidneys of each side, and distribute their branches in the parenchymatous substance of these glands.

“In the third modification, the veins of this system are formed in the same manner as in the preceding, only that the caudal, or other vein returning from the posterior parts, gives off a branch to the vena portæ. The blood returning from the middle and posterior part of the body in the first and second modification of this system, is conveyed only to the kidneys; but, in the third, to the kidneys and liver. The inferior vena cava of the common venous system, in the second and third modification of this system, is composed of the veins returning from the kidneys and testicles or ovaries. In the first modification, the caudal vein receives the veins returning from the kidneys, is united with the veins of the testicles or ovaries, and in this manner, forms the inferior vena cava.”*

In fishes, the venous system is found in all its forms,—in many genera presenting the first modification: all the blood from the skin and muscles of the middle part of the body, from the head to the tail, is collected by venous branches, which, uniting into single trunks run by various routes to the kidneys, and are distributed in their parenchymatous structure. The caudal veins, united to those of the ovaries or testicles, join or rather form, the inferior cava. The *carp*, *tench*, *herring*, &c. present examples of this distribution.

* Edinburgh Med. and Surg. Journal, No. lxxiv.

The second modification, however, is by far the most common: and the third (differing from the second only in this, that the caudal vein, besides the veins going off to the kidneys, also gives a branch to the vena cava, so that the blood goes partly to the kidneys and partly to the liver,) prevails in all amphibious animals. In birds, the veins are arranged according to the last variety; and in these animals the transition to the mammalia may be discovered, since the venous system of Dr. Jacobson unites with the common one. The caudal, ischiatic, and crural veins, run to the kidneys, and give off a large anastomosing branch to the vena portarum: the crural vein, however, likewise sends a branch to the vena cava; so that, in this class of animals, all the blood returning from the posterior part of the body is carried partly to the kidneys, partly to the vena portarum, and partly to the vena cava.

The physiologist above mentioned is convinced, from many experiments upon living animals, that the venous system described by him is intended to regulate the function of secretion. The vena portarum has long been regarded as affording an example of venous secretion; but from this it would appear that, in birds, reptiles, and fishes, the secretion of the kidneys likewise is affected by means of veins and venous blood.

Mr. PATRICK HILL, surgeon in the navy, has described the spur of the *ornithorhynchus paradoxus*.* He observed near the convex side of the spur, a small-spot, like the orifice of a tube; and, on trying to pass a bristle, three drops of a clear limpid fluid issued from it. The other spur was examined, with the same result. On dissecting the foot, he found, at the inner side of the root of the spur, immediately over the articulation, a small cyst, which not did at the time contain any fluid, but from which a horse-hair readily passed through the spur.

* Transactions of the Linnean Society, vol. xii. part. ii.

Physiology—The researches of M. FLOURENS are, in a physiological point of view, among the most important which have occurred within the period of our Essay; and we beg leave to refer to the Report by CUVIER, which we gave at length in our last Number. At present we content ourselves with a condensed account of the conclusions at which he has arrived.

“According to M. Flourens, there are two properties essentially distinct in the nervous system; the one to excite muscular contraction, the other to perceive impressions. The object was to determine experimentally what parts of this system serve exclusively for sensation; and what, on the contrary, serve exclusively for contraction.

“It is evident that the trial of each part could alone ascertain its property. M. Flourens has therefore subjected to trial, separately and in turn, the nerves, the spinal marrow, the medulla oblongata, the tubercula quadrigemina, the cerebellum, and the cerebral lobes. From these experiments, thus chalked out, it follows—

“1st. That the nerves, the spinal marrow, the medulla oblongata, and the tubercula quadrigemina, are capable of exciting muscular contractions.

“2d. That the cerebral lobes and the cerebellum are not capable of exciting them. Haller and Zinn had formerly noted the impassibility (insensibility) of the upper layers of the cerebral lobes; Lorry, that of the corpus callosum; M. Flourens has, for the first time, observed this insensibility in the whole of these lobes, in the cerebellum; and has been the first to fix the limit at the tubercula quadrigemina.

“The irritation of a nerve, separated from the nervous centres by section or ligature, is confined to the excitement of abrupt and partial contractions in the muscles to which this nerve is distributed. The nerve, therefore, excites properly only contractions.

“The spinal marrow being cut successively above the posterior enlargement, above the anterior, and near to the occiput: at first the animal lost the use of its hind paws, then

of its fore paws, and next of the trunk ; but, in all these cases, all these parts, the hind and fore paws, as well as the trunk, preserve their collective movements, (*mouvements d'ensemble*.)

“ We ought to add, that these movements take place only in consequence of external irritations. What has disappeared is, first, the co-ordination (consentaneity) of the movements in leaping, flying, walking, standing, catching, &c.; and, secondly, the volition of these movements.

“ What remain are the contractions, and the connexion of these contractions in associated movements. The spinal marrow, then, properly ties the muscular contractions, in associations (*mouvements d'ensemble*) as to volition and the co-ordination of these movements that resides elsewhere.

“ The irritation of the spinal marrow constantly occasions violent convulsions: its destruction speedily brings on death; but this last effect depends on its action on the involuntary movements. Constantly, the abstraction of one of the tubercula quadrigemina causes the sight of the opposite eye to be lost. The irritation of a tuberculum determines contractions in the opposite iris; its complete removal abolishes the contractions completely. In the tubercula, therefore, the primary principle of the action of the iris and of the retina resides.

“ In proportion as we cut off the cerebellum by successive layers, the animal loses gradually the faculty of flying or running; then that of walking; and finally, that of standing upright.

“ A single cerebral lobe being removed, the animal loses immediately the sight of the opposite eye; but the contractility of the iris of this eye continues, notwithstanding the animal experiences at first a weakness much more marked on the opposite side of the body. In other respects, it goes on as usual. The two lobes being removed, there is no longer any vestige of volition, or of memory, or of any perception: memory, volition, perception, reside then in the cerebral lobes.”

The papers of Mr. SHAW and Mr. BROUGHTON, in our Number for June, will be read with great interest by those who take a part in the investigations so actively carried on, during the last twelve months, with regard to the functions of certain classes of nerves. Mr. Shaw gives a clear and satisfactory description of the nerves which, according to the system of Mr. BELL, are called *superadded*; and one advantage possessed by this new arrangement, which must be acknowledged even by those who deny its accuracy, is that of facilitating, in a remarkable degree, the labour of the student in acquiring a knowledge of this complicated piece of anatomy. Mr. Broughton has detailed various experiments, the chief results of which are, that the portio dura and par vagum are entirely insensible, while the fifth pair is gifted with a high degree of sensibility.—We trust that further reference to papers so lately published is unnecessary.

In a former number, we alluded to a paper of Mr. C. BELL, read before the Royal Society; through the kindness of Mr. Shaw, we are enabled to give a more particular account of the author's views.*

Mr. Bell has entered into an examination of the external apparatus and muscles of the eye, with the view of explaining the necessity of six nerves being given to the parts contained in the orbit.

In the course of this examination, he shows that the six muscles which are attached to the eye-ball do not, as has been supposed, form one class of voluntary muscles; but that, while the four straight muscles, or recti, are provided for the voluntary motions of the eye when directed to objects, the other two, called *oblique*, perform certain involuntary motions. These involuntary actions are shown to be a provision for the better protection of the eye; for, when the eye-lids wink and clash to wash the cornea, the effect would be incomplete, and the object but imperfectly attained, un-

* MS. notes received from Mr. SHAW.

less the cornea was also at the same time raised by the revolving of the eye-ball.

After having proved that the eye-ball revolves so as to carry the cornea upwards during the motion of the eye-lids, and having also shown that the oblique muscles are the agents in this involuntary and instinctive motion, he proceeds to demonstrate that the same muscles elevate the cornea during sleep.

The author says that, while we are awake, the eye is under the active influence of the four straight muscles; but, when the eye-lids are closed in sleep, these muscles resign their office, and the involuntary oblique muscles prevail so as to draw the cornea under the upper eye-lid. This is also shown to be the condition of the eye in faintness, and on the approach of death, and on all other occasions when languor or debility prevail over the voluntary muscles of the frame.

The author notices incidentally, that the enjoyment of the sense of vision is attended with the excited condition of the recti, or voluntary muscles, and that insensibility to the impression on the eye is followed by relaxation and neglect of the same class of muscles; and, consequently, that a depraved or injured condition of the retina is one cause of squinting; for the oblique prevailing, while the recti, or voluntary muscles, are neglected, draw the eye so affected from the parallel line of vision.

After having shown that the recti, or voluntary muscles, are strictly associated with the activity of the retina, or organ of vision, he proceeds to express his opinion that the ideas received through the eye are not limited to the office of the retina, but that the sense of vision, properly so called, is aided by the sense of voluntary exertion in the recti muscles; and that these afford us the knowledge of the position and relation of bodies, in addition to the ideas of form, shades, and colours, which are received through the retina.

The paper is illustrated by references to comparative anatomy, and by observations and experiments on man and brutes.

After having described the variety of actions performed by the muscles of the eye, the author proposes, in the second part of the paper, to arrange the nerves which go into the orbit, according to their offices.

Drs. LAWRENCE and COATES continue their experiments upon absorption, with a view of determining the powers of the veins and lymphatics.* They began by further trials with colouring matters, as prussian blue and indigo. These were attended with negative results; none of them entering the vessels, although so much as nine ounces and a half of the former substance was swallowed by a bitch. The greater number of experiments, however, were made with prussiate of potass, as being both easy of absorption and of subsequent detection by tests. A list is given of thirty-four animals, in which this salt was introduced into the alimentary canal; the parts being left untouched, in the first twenty-one, till after the animal's death; in the others, ligatures were applied. The general result is calculated to show that absorption took place principally through the vena portæ, only one example being mentioned in which the colour of the fluid in the thoracic duct was as intense as in the serum of this vein. Our limits prevent us from being able to allude to these experiments more fully, but the following remarks will, we trust, be read with interest:

“The general weight of evidence in these cases is strongly in favour of the principal absorption having taken place through the vena portarum. Only one case is mentioned in which the colour in the fluid from the thoracic duct was not less intense than in the serum of the vena portarum.

“In this instance, the former was not taken until thirty minutes, and the latter in twenty-one; during the interval of which there is every possibility for much of the absorbed substance to reach the points at which both were examined;

* Account of some further Experiments to determine the absorbing Power of the Veins and Lymphatics. By I. O'B. LAWRENCE, M. D. and B. H. COATES, M. D.—(Philadelphia Journal, No. 10.)

as much greater diversity than this exists in many of the results. Hence it may be supposed that absorption would have taken place in the porta to a greater extent, had both been examined at the same time. Another circumstance which affects the inference to be drawn in a very material degree, is, that the vena portæ conveys so much larger an amount of fluid than the thoracic duct, that an equal intensity of colour implies the presence of a much larger quantity of the chemical agent. This is also a reply to a suggestion made in the report to the Academy of Medicine, in favour of the thoracic duct as a route. But, as this was based, as far as relates to the mucous membranes of which we are treating, upon only seven experiments, and in none had we then proceeded to examine the serum of the vena portarum, it is hardly necessary to array them in opposition.

“Inferences, however, of a more decisive kind may be drawn from some of the experiments which ensue. Five are first enumerated, in which the vena portarum was secured by a ligature. In the two first, the cardia being undisturbed and the fluid introduced down the œsophagus, the œsophageal and pharyngeal veins had access to it, and their radicles or capillaries may have absorbed the salt. A degree of uncertainty also prevails whether the vena portarum was in all these instances properly secured. In the three last, however, this point was carefully ascertained by subsequent dissection, and a ligature was also passed round the cardia to prevent the regurgitation of the fluid into the œsophagus itself. The prussiate was then introduced through a wound in the upper part of the duodenum, and this part also tied. In the first case, the prussiate was detected in the heart in thirty-four minutes; in the second, in thirty-nine; and in the third, in thirty-five minutes. This we consider as proving, directly and decidedly, that there are other means of absorption besides the veins. We now proceeded to tie the thoracic duct, and endeavour to ascertain whether the prussiate could be made to enter the circulation, by passages independent of this. The three first experiments recorded

are not quite definite, from the cardia not being secured, as the fluid was liable to regurgitate into the lower part of the œsophagus ; a circumstance which we always found to take place when that part was not artificially closed. It may also be remarked, by the way, that the œsophagus was always found, when examined for that purpose after feeding, to contain a portion of the substances swallowed, whenever these retained the fluid or semifluid form.

“ As, however, the agent was conveyed into the systems of these animals, it certainly follows, from the two first cases, that another route than the thoracic duct admitted of the passage of the salt. In the last of the three experiments, both this vessel and the trunk of the lymphatics in the right side of the neck were secured ; thus stopping every known outlet to the system of lacteals and lymphatics. The blue was, nevertheless, easily produced in the serum of blood taken from the right side of the heart, in twenty minutes.

“ In tying the lymphatic outlets, great care and much time were employed. The sufficiency, however, of the ligatures was proved by extreme turgescence of the trunks and all the visible branches, immediately after the application of the ligatures, generally followed by much enlargement, and frequently by their rupture in different places.

“ In the next animal, after securing these parts, the cardia was also tied, thus confining the visible means of absorption to branches of the vena portarum alone. Injection of the prussiate was made through an opening below the pylorus, and the wounded part tied. In thirty-two minutes, blood was taken from the right side of the heart, the serum of which gave a strong blue. We regard it, then, as evinced, first, by the two first of these experiments, that other means of absorption than the thoracic duct exist ; secondly, by the third, that other routes exist than either that or the lymphatic trunk on the right side,—thus confining them, of all visible vessels, to the sanguineous ones alone ; and thirdly, by the last, that absorbed fluids are carried through

the trunk of the vena portarum individually, as access was barred to the branches of any other vein.

" In the four next instances, after tying both the two lymphatic trunks and the vena portæ, injections of prussiate of potass were made down the œsophagus, without tying either the cardia or pylorus. In all these cases the prussiate was conveyed into the circulation. In the first, it was discovered to be in the right side of the heart in thirty-six minutes; in the second, in forty-eight minutes; in the third, it was found in the aorta in thirty minutes; and in the last it was exhibited, more faintly, in the shorter period of twenty-five minutes, in the right side of the heart.

" In four cases which follow, all these vessels were first secured, and then the cardia. The upper part of the duodenum was lastly secured, after injecting the agent through it. In none of these was a distinct blue to be found, in either the serum of the right side of the heart or in the urine. In the second instance only a *bluishness* is mentioned as having been visible in the serum of the right side of the heart. As, however, none of the others are so,—as the term is so weak,—and as the urine in the same case, although twenty-five minutes had elapsed, did not indicate it, it affords no very formidable exception. The intervals at which the examinations were made, for the heart, are twenty-five, upwards of twenty-three, twenty-five, and twenty-six minutes; for the urine, thirty-two, upwards of twenty-three, thirty-six and a half, and twenty-eight minutes.

" A comparative experiment was made by tying all the attachments of the stomach whatever, in order to ascertain the effect of simple infiltration. No prussiate was found in any of the fluids, although the stomach, almost immediately after tying, gave an evident blue on applying the test to its outer surface, the animal being alive. The contents of the carotid were removed for examination in thirty-one minutes; of the right side of the heart, in thirty-four; of the bladder,

in thirty-seven; and then the pelvis and papilla of the kidney were examined.

“ We conceive we have thus established, that articles taken into the stomach, may escape by three outlets for absorption,—namely, the vena portæ, the œsophageal veins, and the thoracic duct; and, if all these are closed, the absorbed matters are no longer conveyed to the circulation or to the urine. With regard to the quantity conveyed by each, we have no sufficient means of judging. As the quantity of fluid, however, contained in the vena portarum is so much greater than in the thoracic duct, it follows that, to produce a colour of equal intensity, a much larger amount of the colouring matter is requisite. * * *

“ In reasoning upon the subject of absorption, the question has frequently arisen whether the articles found in the living fluids exist there as chemical substances, or have their chemical nature altered and animalized by the action of the vessels through which they have entered the system. In other words, it has been enquired whether the chemical results we obtained were produced without previously causing the death of the fluid, and thus again reducing it to the influence of chemical laws, from which its vitality had previously entirely protected it. The instantaneous changes which take place in the recent chyle on applying the test, seem to forbid the idea of two successive alterations being produced, and one of them commonly so gradual in its progress as the extinction of life. It was, however, deemed a curious subject of inquiry, whether artificial chemical changes can take place in the fluids while they continue to circulate in living vessels, and the ordinary actions of life go on? We can hardly consider fluids as having undergone a change from life to death, while they continue to permeate the living organs, including the brain, and all the functions continue with no greater disturbance than naturally ensues from doing so great violence to the system as is necessary to the experiment. We commenced by throwing prussiate of potass

into the abdomen, and green sulphate of iron into the cellular tissue, in order to try whether the well-known result of their admixture, the prussian blue, would be produced in the vessels. This, however, did not take place; and we resolved to repeat it, by throwing the sulphate, as the article of more difficult absorption, into the abdomen, (where this process went on with more facility,) and the prussiate into the cellular substance. On performing this, we were gratified by the striking result of a distinct and beautiful blue in the thoracic trunk and its contents, and in nearly the whole substance and surface of the *lungs*. These viscera were preserved in spirits, and are now in our possession. The blood threw up a coagulum of a strong blue colour, and the lymph and chyle from the thoracic duct threw down a blue deposit. Thus not only a foreign, but a pulverulent substance, could present its unnatural stimulus and circulate through the vessels, and could accumulate in the lungs, without preventing the actions of life from considerable exertion, and without occasioning coagulation of the blood. The animal manifested some difficulty of respiration before she was killed, but walked about without the least difficulty, and uttered no cries, nor other signs of disturbance of its powers. In another case, the urine and lungs are noted in our Journal as exhibiting a blue. The other parts, similar to those above enumerated, are not described as being found coloured. In a third, the fluid in the thoracic duct was blue; but not the other fluids examined, nor the lungs. Two unsuccessful trials were also made. In another case the thoracic duct was tied, and the same process repeated. A decided bluish green was here found in the urine; but neither the serum of the arterial blood nor the lymph of the ductus thoracicus manifested the blue or green. Several inferences may be drawn from this experiment, with which we shall not now trouble the reader.

“ We repeated the celebrated experiment of Majendie, in which he separated a limb from the body, except by the double attachment of either an artery and a vein, or of their

two columns of blood circulating through quills. We employed nux vomica, and succeeded entirely in one case without the quills, and in two in which they were used. In six other cases, two of which were with prussic acid, we failed. In conducting this distressing operation, we have not escaped the mortification of disappointment: it has, however, been gratifying to us, as far as we went, to verify the results of this enterprising physiologist. They depend, however, on *symptoms* for their evidence; chemical proof of the presence of nux vomica not being capable of exhibition. In one experiment, while waiting the result of an introduction of nux vomica, made ten minutes previously, two drachms of the solution of prussiate of potass, which we employed, were forced into the cellular substance of the separated limb, from a pointed syringe. This salt was afterwards detected in the body, after having passed through one quill with the column of venous blood; thus rendering visible its actual transition, and confirming the results of Majendie."

A paper, recently read to the Institute, contains the result of various interesting experiments on *absorption* and *exhalation*, by M. FODERA.* The object of this physiologist is to show that exhalation, which he denominates *transudation*, and absorption, which he calls *imbibition*, are in reality the same phenomenon, arising from the imbibition of different vessels, operating in the first case from the interior of the vessel outwards, and in the second from the exterior inwards. Majendie had been led to conclude that venous absorption was effected by imbibition; and one of the experiments leading to this opinion was that of insulating a portion of a venous trunk, and placing its surface in contact with a poison: the presence of this within the vessel was soon manifested. M. Fodera has reversed this experiment. He injected a poisonous substance, with all necessary precaution, into a portion of artery confined between two liga-

* Journal de Physiologie, Janvier 1823.

tures, and insolated, not only from the cellular texture, but likewise, he informs us, from the lymphatics and *vasa vasorum*: the poison took effect. He obtained the same result on filling a portion of an artery, vein, or intestine, with the poison; removing them, and placing them either in a wound made in another animal, or in the abdominal cavity. The rapidity of the poisoning in these cases varied according to the age and species of the animal, the thickness and length of the portion of vessel or intestine used, its more or less complete distention, and the degree of solubility of the poison. The same phenomena presented themselves when sulphuretted hydrogen was employed.

If an artery or vein be laid bare in the living animal, an oozing is observed to take place through the coats of the vessel. This oozing is increased if a ligature be applied, and dropsy may be produced in this manner. From these facts, M. Fodera concludes that exhalation is only a transudation through the vascular parietes; and many physiologists thought so before the existence of exhalent vessels was suggested.

In a former Number,* we detailed various experiments of M. Fodera, tending to prove that, in the dead body at least, the transudation of liquids may take place at the same time from the interior to the exterior of the coats of vessels or intestines, and *vice versa*. Without recapitulating what was then laid before our readers, we proceed to notice some further observations by the same author. Phenomena similar to those just detailed are said to present themselves in the living body. M. Fodera, for example, has found in the bladder, or in the thorax, substances injected into the peritoneum; and, in the abdominal cavity, substances introduced into the bladder or thorax. In these experiments he employed a solution of galls and the sulphate of iron, or else this last and the prussiate of potass. The change of colour into black or blue in these experiments, announcing

* April, 1823.

the occurrence of transudation, was not observed in general under an hour, but it may be rendered almost immediate by employing galvanic influence.*

The conclusions at which M. Fodera arrives from the result of his experiments, are, "1st, that exhalation and absorption take place by transudation and imbibition, and that they depend upon the capillarity (*capillarité*) of the textures; 2dly, that this double phenomenon may take place in every part, and that the liquids which they have imbibed may be conveyed equally by lymphatic vessels, arteries, or veins." If the effects of absorption have not been manifest in those experiments where a portion of intestine containing poison was insulated so far as to communicate with the rest of the body only by a lymphatic vessel, M. Fodera attributes it to the extreme slowness of the circulation of the lymph. He placed liquid prussiate of potass in the subcutaneous cellular tissue of the thigh and belly of two young rabbits; and detected this substance, in the former animal at the end of some minutes, and in the second at the end of half an hour, in the lymph of the thoracic duct, in the urine, the mucus of the intestines, the synovia, the serum of the blood, the water of the pericardium, of the pleura, and peritoneum, as well as in all the solid parts, except the crystalline lens, the substance of the brain, the interior of the nerves, and the bones. Now, although these results seem calculated to prove that absorption takes place both by lymphatics and blood-vessels, yet it is necessary to keep in mind that the mere presence of a substance in a lymphatic vessel does not constitute absorption. "That absorption may be effected, (says M. Majendie,†) it is not sufficient that the sides of a vessel imbibe, but the substance must also be carried along towards the heart: imbibition and transportation constitute absorption."

M. Fodera has likewise devoted considerable ingenuity and research to the explanation of the phenomena which

* See the Number for April. † Journal de Physiologie, Jan. 1823.

attend the rapid passage of various substances from the stomach to the bladder, by which it appears that the experimentalists of this country were mistaken in supposing that such transition was effected by some other than the ordinary medium of the lymphatics or blood-vessels.—M. Fodera introduced a catheter, with a cork adapted to it, into the bladder, and then injected a solution of prussiate of potass and iron into the stomach; as soon as the salt was detected in the urine, (an occurrence which in one instance took place in ten, and in another at the end of five minutes,) the animals were instantly opened, and the prussiate was found in the blood of the vena cava inferior, of the heart, and of the aorta, in the thoracic duct and other parts. These experiments, if found by others to yield similar results, must be admitted as proving both the extreme rapidity of absorption, and that the communication between the stomach and bladder must be looked for in the usual course of the circulation.

The celerity with which absorption is effected in some organs, is rendered still more striking by experiments upon the lungs. M. Fodera injected prussiate of potass into the trachea, and cut out the heart of the animal (a rabbit,) as soon after as possible. The operation was performed in twenty seconds; and, notwithstanding the shortness of the time, the interior of the left auricle was stained of a greenish-blue colour, which was deeper in the mitral valve, and less apparent, although still perceptible, in the aorta. It will be observed that the results detailed by M. Fodera agree, in general, with those obtained by Majendie.

A memoir of considerable interest, on the *exhalation and absorption of azote in the lungs*, has been published by Dr. EDWARDS.* The results of experimentalists differ very widely on this subject: some, as Humboldt, Spallanzani, Davy, &c. believed that a notable quantity of azote was absorbed during respiration; Allen and Pepys, that no

* Annales de Chimie et de Physique, Janvier.

sensible change of its quantity occurred ; and lastly, Berthollet and Nysten found it to be increased, instead of diminished. It is the opinion of M. Edwards, that in the different experiments, where diminution of the quantity of azote takes place on the one hand, and increase on the other, there are two views which may be taken of these results. In the first, the quantity of azote which disappears would be regarded as arising from absorption alone, and its increase to exhalation : only one of these functions takes place at the same time. In the second, the two functions of absorption and exhalation may be regarded as going on simultaneously ; and, consequently, the results would only give the difference in their action. Thus, when an animal breathes in the atmospheric air, these two functions being simultaneous, azote would be absorbed on the one hand, and exhaled on the other ; and from the relation between the absorption and exhalation would necessarily arise three different results, according to circumstances. When the exhalation exceeds the absorption, exhalation alone would be the apparent effect ; when the absorption predominates, the converse would hold good ; and, lastly, when the two functions are in the same proportion, no obvious effect would result, but the azote expired would just equal that inspired. Upon this principle is attempted the explanation of the jarring opinions upon this subject.

In our last Number will be found the detail of numerous experiments by Dr. WILLIAMS, intended to prove the existence of some sources of inaccuracy in the conclusions formed by Dr. CARSON, with regard to *the effects of wounds made into the chest*. We beg to refer to the interesting paper of Dr. Williams for his reasoning upon this subject, while we direct our attention to another attack upon the accuracy of Dr. Carson, made in a late American publication.*

* Experiments and Reflections on the Cause of the Vacuity of the Arteries after Death. By WILLIAM FENNELL, M. D. of Virginia.—(*Philadelphia Journal*, No. 9.)

This gentleman, after the performance of various experiments, came to the following conclusion, "that the difference of the distribution of the blood after death from that in which it must have existed in the living system, arises chiefly from the elastic power of the lungs; and that the emptiness of the arteries, and of the smaller vessels, observed after death, admits of a satisfactory explanation from the supposed operation of this cause, combined with that of the elasticity of the arterial canals." Dr. Fennel informs us that he was led, by various circumstances, to doubt the accuracy both of the experiments of Dr. Carson and his inferences; he proceeds to say:

"Exactly after the manner of Dr. Carson, I took a half-grown rabbit, and made two incisions, one on each side, between the fifth and sixth ribs, an inch in length. In six minutes the animal expired from a collapse of its lungs; and as soon as it ceased to breath its body was opened, which gave the following appearances:—The heart still continued to act, though very imperfectly. The arteries could be seen to diminish: while the veins, more particularly the large veins, were enlarged. When the left auricle and ventricle were opened, they contained very little blood. I placed two ligatures around the aorta, one at its great bifurcation, the other a few inches above it, and cut out the enclosed part: on examination it was found to contain a small quantity of blood. The cutaneous arteries and veins could be seen very beautifully anastomosing, when I first separated the integuments from the body, which in these animals is very easily accomplished, even without the aid of a scalpel. In the space of five minutes the arteries were empty; and the veins, though not so much dilated as they were at first, contained blood enough to make them round.

"On cutting into the muscles, no blood exuded, as is asserted by Dr. Carson; nor were the muscles more red than in the animals killed by cutting the spinal marrow. The membranous parts exhibited the blood-vessels very much like the skin, and in a few minutes their arteries contained

no blood ; their veins were round, but not as large as when I first opened the body of the animal. The intestines gave nearly similar appearances, and, after the cessation of action in the arteries, they showed the same phenomena as did the membranes and cutaneous parts. The liver was of a reddish brown colour. On opening the right side of the heart and pulmonary artery, with the *venæ cavæ*, there was an inundation of blood, partly coagulated : the pulmonary veins were quite empty, and the lungs of a light red colour.

“ After a repetition of these experiments, sufficiently often to satisfy us that in every instance the same phenomena would take place, I cut the spinal marrow of other animals, near the superior cervical vertebræ, which produced death in seven minutes. I opened the bodies as in my first experiments, and found in every instance the same appearances, except in the pulmonary veins, which contained a small cylinder of partly coagulated blood ; and the lungs, which were larger and of a deeper colour than in the former experiments, owing to the greater quantity of blood they contained.

“ Having repeated these experiments sufficiently often to convince all present of their accuracy, I killed several animals by collapse of the lungs, also some by cutting the spinal marrow as before, and suffered them to lie several hours before I opened them : on examination, no difference could be found as respects the state of the arteries.”

Having thus demonstrated, to his own satisfaction, and that of his coadjutors, that the appearances presented by animals killed by collapse of the lungs agree in all respects with those exhibited by animals put to death by dividing the spinal marrow, Dr. Fennel concludes that there is not any tendency in the lungs to form a vacuum ; or, if such exist, it does not drain the other parts of the body of their blood ; but, on the contrary, this physiologist offers the following explanation of these phenomena :

“ That respiration ceases previously to the entire cessation of the action of the heart and arteries, in animals which are

killed or die a natural death, is a fact that every one must acknowledge. This being the case, when respiration ceases the lungs become flaccid, and thus occasions a partial obstruction in the weakened circulation. But the heart and arteries continuing to act sufficiently to empty themselves of the blood imposed upon them, forcing it into the veins, which tubes being less powerful than the arteries, and having the obstruction in the lungs to oppose the passage of blood from the right to the left side of the heart, they unavoidably become the part of the circulatory system which must contain the great mass of the blood after death.

“That the partial obstruction in the lungs, and the contraction of the heart and arteries, are the cause of the vacuity of the arteries, is proved, as well by my own experiments as by the appearances on dissection of animals killed by lightning. The life of the animal here being destroyed in an instant, the arteries, not having the power to contract, cannot throw the blood from their cavities into the veins; on which account the blood of animals thus destroyed is always found in the arteries and veins in a just proportion, though the elasticity in every part be the same as before death.”

Some interesting observations on *the effects produced by bile in the process of digestion*, have been made by Mr. BRODIE.* As we have not before mentioned these to our readers, we shall give them in the author's own words.

“When an animal swallows solid food, the first change which it undergoes is that of solution in the stomach. In this state of solution it is denominated *chyme*. The appearance of the chyme varies according to the nature of the food. For example, in the stomach of a cat, the lean or muscular part of animal food is converted into a brown fluid, of the consistence of thin cream; while milk is first separated into its two constituent parts of coagulum and whey, the former of which is afterwards re-dissolved, and the whole con-

* Journal of Science, No. xxviii.

verted into a fluid substance, with very minute portions of coagulum floating in it. Under ordinary circumstances, the chyme, as soon as it has entered the duodenum, assumes the character of *chyle*. The latter is seen mixed with excrementitious matter in the intestines ; and, in its pure state, ascending the lacteal vessels. Nothing like chyle is ever found in the stomach ; and Dr. Prout, whose attention has been much directed to the chemical examination of these fluids, has ascertained that albumen, which is the principal component part of chyle, is never to be discovered higher than the pylorus. Now, in my experiments, which were made chiefly on young cats, where a ligature had been applied so as to obstruct the choledoch duct, the first of these processes, namely, the production of chyme in the stomach, took place as usual ; but the second, namely, the conversion of the chyme into chyle, was invariably and completely interrupted. Not the smallest trace of chyle was perceptible, either in the intestines or in the lacteals. The former contained a semi-fluid substance, resembling the chyme found in the stomach ; with this difference, however, that it became of a thicker consistence in proportion as it was at a greater distance from the stomach ; and that, as it approached the termination of the ileum in the cæcum, the fluid part of it had altogether disappeared, and there remained only a solid substance, differing in appearance from ordinary fæces. The lacteals contained a transparent fluid, which I suppose to have consisted partly of lymph, partly of the more fluid part of the chyme, which had become absorbed.

“ I conceive that these experiments are sufficient to prove that the office of the bile is to change the nutritious part of the chyme into chyle, and to separate from it the excrementitious matter. An observation will here occur to the physiologist : If the bile be of so much importance in the animal economy, how is it that persons occasionally live for a considerable time, in whom the flow of bile into the duodenum is interrupted ? On this point it may be remarked, 1st. That it seldom happens that the obstruction of the cho-

ledoch duct from disease is so complete as to prevent the passage of the bile altogether; and the circumstance of the evacuations being of a white colour may prove the deficiency, but does not prove the total absence of bile. 2dly. That in the very few authenticated cases which have occurred of total obliteration of the choledoch duct in the human subject, there has been, I believe, always extreme emaciation, showing that the function of nutrition was not properly performed. 3dly. That the fact of individuals having occasionally lived for a few weeks or months under these circumstances only proves that nutrition may take place to some extent without chyle being formed. In my experiments I found that the more fluid parts of the chyme had been absorbed, and probably this would have been sufficient to maintain life during a limited period of time."

MORBID ANATOMY AND PATHOLOGY.

Morbid Anatomy.—Many individual cases of great interest are to be found in the various periodical works of the last few months: these it is impossible for us to notice individually, and we are therefore constrained to limit our remarks to more general questions.

Much attention has been devoted by Dr. BARON, of Gloucester, to the examination of *tuberculous diseases*, and in a late publication* he has advanced some new opinions with respect to the progress of tubercles of the lungs. In the descriptions of these by the most distinguished pathologists of modern times, they have been represented, when first perceptible, as little bodies of various size and consistence. Dr. Baillie compares them to the heads of "very small pins;" and M. Laennec informs us that they vary "from the size of a millet-seed to that of a hemp-seed:" both these eminent men agreeing that tubercles, when they can be first perceived to exist in the form of little granular bodies, possess-

* Illustrations of the Enquiry respecting Tuberculous Diseases. By J. BARON, M. D. &c. &c.

ing such a degree of consistence as to render them capable of being distinguished from the surrounding textures by the sense of touch. This, if not expressed, is distinctly implied in the descriptions of all morbid anatomists with which we are acquainted. Here, then, is the first feature of novelty in the work before us ; Dr. Baron maintaining that tubercles, when first formed in the lungs, are not to be detected by the touch, on account of their extreme delicacy and the elastic nature of their structure. " They are (says he,) very small vesicular, transparent bodies, and shine amid the unchanged texture of the surrounding lung." He subsequently compares them, when arising on the surface of the membranes, to the globular incrustations to be seen on the leaves and stalk of the ice-plant. There is nothing inconsistent, we would observe, between this description and that which precedes,—except that the former begins at a later period of the disease. Our author acknowledges that, in the human subject, these tubercles are very rarely seen in this early stage of their progress ; that the size is speedily increased, the transparency diminished, and the general character of extreme delicacy lost ; in short, they now assume that granular form which others have described as their first perceptible stage. That such a phenomenon as that described by Dr. Baron may occasionally exist, and yet have escaped the scrutiny of preceding anatomists, we can conceive quite possible : first, because it is very rare,—that is, persons very rarely die in so early a period of phthisis ; and, secondly, from the difficulty that there must necessarily be in determining their existence. They are represented as extremely minute, perfectly transparent, and vesicular : reflecting upon these characters and the peculiar texture of the lungs, we cease to wonder that bodies of such delicacy should have escaped notice.

In a dissection lately performed at La Charité, in Paris, by MM. ANDRAL and BRESCHET, the lungs were found filled with hydatids, some of which also were situated in the

pulmonary veins. "Many of these hydatids were lodged in pouches having a smooth surface, which appeared to us at first so many cysts; others, empty and rolled up many times upon themselves, were contained in narrow canals, of which they had taken the elongated form. The internal surface of these canals was smooth, like that of the large pouches: they ramified like vessels. Finally, we soon discovered that there terminated at each pouch a vessel of small calibre, which, in order to form it, became more or less considerably dilated. We then dissected the pulmonary veins to their origin, and, when we had arrived almost at their capillary division, we began to see many of them present a great number of dilatations, which were filled with hydatids. After having undergone this enlargement, the vein resumed its former dimensions, and then became dilated again a little further on. The larger pouches would have contained a large nut, while the smaller would scarcely have admitted a pea. They existed equally in both lungs. The hydatids which they contained had all the characters of *acephalocysts*. Many presented in their substance small points, of a white appearance, and others showed a number of miliary granulations on the internal surface. The greater number were broken. The pulmonary tissue round them was partly sound and crepitating; in others deeply gorged, and even hepatized."*

One of the most important contributions to pathological anatomy which has for some time appeared, is the Essay on the *digestive canal*, by M. ANDRAL.†—M. Andral commences his interesting observations by remarking that the alimentary canal, when inflamed, is for the most part contracted, and appears injected if viewed externally: such contraction, however, is by no means a certain indication of in-

* Journal de Physiologie, Janvier 1823.

† Sur l'Anatomie Pathologique du Canal Digestif, considéré dans sa Portion sous Diaphragmatique. Par M. ANDRAL, fils.—(*Nouveau Journal de Médecine*, Novembre 1822.)

flammation, as it is not unfrequent about the pyloric extremity of the stomach and in the great intestine, without evidence of any increased vascular action. At the same time he warns us, that the state of the mucous membrane can never be judged of from the external examination, as he has frequently found it inflamed, and even ulcerated, where the peritoneal covering has been free from disease. The commencement of inflammatory action in the mucous coat is attended by an increased flow of blood to the part; and M. Andral has been in the habit of detaching the membrane in this and other stages of disease, to examine its separate state. Separated, then, from the rest of the intestine, and held between the eye and the light, the mucous membrane, under these circumstances, appears either covered with a fine network of vessels, with interstices between them, or else these are so close as to give the appearance of a general stain or dye pervading the whole. The colour, however, is by no means invariably red, but, on the contrary, frequently presents a deeper or lighter shade of brown. This does not depend upon the duration of the diseased state, so much as upon its violence, and may be produced within an hour by the introduction of certain corrosive poisons into the stomach of animals. This brown colour is, to a certain extent, indicative of incipient disorganization, and is generally attended with softening. The injection of the part with blood must, of necessity, be productive of thickening; and in chronic diarrhœa it has been known, by M. Andral, to acquire four times its natural dimensions. This thickening may be either general or confined to a small portion: when circumscribed, it forms round or longish patches raised above the surrounding level, and varying in size from a five-franc piece to that of a franc. These are sometimes found in the stomach, but are more common in the colon, and most common of all in the inferior part of the small intestine: sometimes they are solitary, and in other cases occur in great numbers. They likewise vary in colour; some being red, and others white: the former are conjectured to have

been of recent formation, and the latter to have resulted from inflammation, the other consequences of which have passed away.

Besides the thickening and soft or pulpy state of the mucous membrane, M. Andral likewise describes what are called *vegetations*, consisting of elevations of a red or brown colour, rising four or five lines above the surrounding level, extremely soft, and bearing some resemblance to the papillæ of the tongue. These he has only found in the great intestine; but a case is mentioned by Orfila, where they occurred in the stomach of a man who had taken powdered cantharides two months previously. Pustules are likewise described: these are conical, generally depressed in the centre, and white, so that they bear a great affinity to those of small-pox; which they also resemble in being grouped. They are found most frequently in the lower portion of the small intestines. In the colon, pustules of a different kind from those described are frequently present: they are described as resembling boils, having a bare and pointed head. M. Lermnier proposes calling them *exanthème interne*. This is one of the morbid alterations frequently found in fatal cases of fever.

The inflamed state of the membrane lining the alimentary canal gives rise to a corresponding change in the secretions: the mucus, instead of being tenacious and consistent, becomes liquid like serum, and in other instances is inspissated so much as to form a false membrane. This is generally found in the stomach or great intestine. In a girl, twelve years of age, M. Andral found a number of inflamed patches on the inner membrane of the stomach, and each of these covered by a layer of grey tenacious matter, resembling, or rather constituting, a false membrane; which, however, did not extend to the other parts of the stomach, which were not inflamed. Sometimes inflamed portions of bowel contain a reddish liquid effusion, which appears to consist of blood and mucus. Sometimes the quantity of fluid poured out is immense; Morgagni mentions an instance of a woman void-

ing by stool so much as forty pounds in a day. It is also asserted by M. Andral, that, when a portion of mucous membrane is inflamed, it excites an increased flow of bile towards it.

In such cases as we have been describing, the cellular substance immediately beneath the mucous membrane generally remains healthy, even when the inflammation runs high; but in chronic cases it frequently assumes a dense structure, and sometimes is very much thickened.

The muscular coat does not seem subject to many alterations of structure: it is sometimes so soft as to be easily torn, and sometimes assumes a scirrhus degeneration; but the most frequent occurrence in inflammation of the neighbouring parts, is to find the muscular coat contracted. This is easily shown by injecting any corrosive poison into the intestines. M. Tartra mentions the case of a person who died three months after swallowing nitric acid: the intestinal canal was so much contracted that the calibre, throughout the whole extent, was no larger than that of a quill. These violent and irregular contractions are regarded as one of the causes of producing into-susception; a state which, though frequently combined with inflammation, more commonly exists without it.

Proceeding from within outwards, according to the order of M. Andral, we arrive at the sub-peritoneal cellular substance, which is but very seldom affected: when, however, it does participate in the diseased action, the change of texture chiefly consists in fragility and increased thickness. The peritoneum very seldom participates in inflammation originating in the mucous membrane; when, however, this is the case, it becomes easily torn; and occasionally the whole parietes of the intestine becomes so soft as to be lacerated by the slightest force, or even reduced to pulp by rubbing in the hand. This change is more frequent in the stomach than elsewhere.

Ulcerations are next mentioned, and are supposed to arise from the previous disorganization: they may occur in any

part of the tube, but are most frequent in the ileum, and least so in the duodenum and rectum. When they exist in the stomach, they are generally limited to one or two, but in other parts of the canal they are numerous. In the upper part of the small intestine they are always distinct from each other, but in the lower portion they are often blended together, forming a large ulcerated surface. Papulæ and pustules have been mentioned as occurring in the mucous membrane of the intestine; and, as on the tops of these a small eroded point may be perceived, there is little difficulty in supposing this to extend gradually towards the base, and so give rise to ulcers, in the same manner as papulæ and aphthæ of the mouth. The size of these ulcerations varies very much; some are scarcely so large as the head of a pin, and others extend several inches in every direction. Some are of an oblong shape, some exactly circular, and others linear. In the cœcum, M. Andral has found the mucous membrane entirely removed by ulceration, for more than six fingers' breadth. The edges (which are always formed by the mucous membrane) are sometimes elevated, and sometimes they are on a level with the base of the ulcer; sometimes they are red and thick, sometimes white and thin; and, lastly, they are occasionally irregular, giving the appearance of fringes. When the ulcers are numerous, the membrane between them is sometimes quite detached from the subjacent cellular texture. If the ulceration be of recent formation, the laminated tissue at the bottom is of a natural appearance; but, if it be of some standing, it acquires such a degree of thickening that it may be felt by the finger externally; it becomes uneven and granulated; it is of a red, brown, or greyish colour, and secretes a fluid which sometimes passes into the form of a false membrane; lastly, it may be black, resembling an eschar. The most general process, however, by which these ulcerations are formed is that of insensible absorption, laying bare the muscular tunic: this sometimes retains its natural state; in others, it is destroyed in its turn, the ulcer extending to the peritoneal coat.

This last membrane next becomes implicated, and perforation of the intestine results.

Such is the progress of ulceration when it extends in depth; but, in the great majority of cases, it merely spreads along the inner membrane. Perforations, however, may take place without ulceration, where all the coats of the intestine have become softened at the same time: the force exerted by its contents may, under such circumstances, rupture the bowel.

When perforation has supervened, it may produce a communication between the alimentary canal and the external surface, constituting artificial anus; or between the canal and some other organ, as the liver, kidney, or bladder; or, lastly, the opening may communicate with the peritoneal sac, and the contents of the intestines be effused into it. Patients are sometimes made aware of this having happened, by some peculiar sensation at the moment of its occurrence. This accident proves rapidly fatal, frequently within a few hours. The general consequence of effusion into the peritoneum, is the speedy occurrence of acute inflammation: occasionally, however, the inflammation assumes the chronic form; and a curious instance is mentioned by M. Andral, in which a preternatural opening was formed, by which the contents of the intestines were evacuated. A young man, labouring under pulmonary consumption, was affected with diarrhœa, unaccompanied with pain: at length he complained of great uneasiness about the umbilicus, which was increased by pressure, and continued for eight or ten days. At the end of this period the patient felt the abdomen wet with a yellow liquid, and perceived a fissure or rent at the umbilicus: during the same day, an intestinal worm (*ascaris lumbricoides*) was voided by this new anus. Another circumstance is mentioned, as sometimes preventing the bad effects which must otherwise arise from perforation of the intestinal canal,—viz. the application of some part so accurately to the ulcerated opening as to prevent it from being pervious. Thus, M. Andral has seen one of these apertures covered by the folds of the mesentery, and also the spleen accurately ad-

justed, although without any adhesion, to an opening in the great curvature of the stomach. It has been asserted that effusions from the intestines into the peritoneum have been found to exist, without having excited inflammation; but M. Andral conjectures, apparently with justice, that these supposed perforations must have been lacerations, produced in the course of the dissection: an opinion which derives still further probability, when we remember the degree of softening which occasionally results from inflammation.

Suppuration is another result of inflammation, and generally takes place on the free surface of the membrane; sometimes, however, it occurs in the cellular texture beneath, resembling the abscess of *cynanche tonsillaris*. Such submucous collections of matter are extremely rare; the best example mentioned by M. Andral occurred in the duodenum. He has likewise several times seen small white spots formed by a pearly fluid, which changes its situation on running the finger over the membrane covering it.

Gangrene of the intestines is regarded by M. Andral as of much less frequent occurrence than has been heretofore supposed, although in some diseases, as typhus, it is not unusual to find true eschars on the mucous membrane, which, by dropping off, give rise to ulceration: sometimes these ulcers are found with the ulcer nearly detached, and only adherent by a thin shred. These appearances are compared to what is seen on the surface of blisters when they run into mortification: and it is further asserted that the formation of these eschars on the surface of the skin and mucous membrane of the intestines seem to coincide,—an opinion which, if correct, might lead to important practical results.

It appears, then, that there are three stages of this inflammation: first, there is merely a greater or less degree of injection of the mucous membrane; secondly, an alteration of its structure, consisting in thickening, softening, or an exanthematous condition; and, thirdly, disorganization and ulceration. The two latter are so well marked as scarcely to admit of doubt, but not so the former; for, as the simple en-

gorgement of blood which occurs in the lungs immediately before death may be confounded with pneumonia, so the mere existence of an unusual quantity of blood in the mucous membrane of the bowels may be mistaken for inflammation.

In order to avoid this error, M. Andral enters into the following considerations.—Some hours before death, when the action of the venous blood towards the heart has experienced some considerable interruption, the intestines are found to become more or less injected. The obstruction, whether existing in the heart or lungs, causes the blood to fall back upon the liver, which likewise becomes loaded, and refuses to admit the blood coming from the vena portæ; and hence the injection of the intestinal canal. This congestion, while it still remains purely mechanical, may exist in various degrees. In the first, or slightest degree, the vessels of the submucous cellular tissue become gorged with dark blood, giving a marbled appearance to the stomach, and forming dendritic delineations on the intestines. When the accumulation goes a little further, minute branches are observed, highly injected, and passing into the mucous membrane, which sometimes presents brownish-red patches; and occasionally true ecchymosis of the cellular texture occurs. Lastly, the mucous membrane, when the engorgement is at its height, suffers the blood to ooze from its surface: this sanguineous exhalation is at the same time observable in other parts, as the lungs, bronchiæ, and brain. This appearance may likewise be artificially produced, by placing a ligature on the vena portæ, or by putting animals to death slowly.

Tubercles are very frequently met with in the cellular texture beneath the mucous membrane, particularly in the lower end of the jejunum and in the ileum. They are of a white colour, and vary in size from the head of a pin to a pea; they are for the most part insulated, and seldom become united, as in the lungs. Sometimes they are completely covered by the mucous membrane, but more fre-

quently ulcers are found at the same time, the bottom of which consists of the remains of the tubercles. M. Andral is of opinion that these formations are independent of inflammatory action, although marks of inflammation are frequently to be seen in the part where they exist. A great analogy between these and pulmonary tubercles is pointed out by the author, who says that they are present in the majority of patients labouring under consumption of the lungs. Another form of tubercle is the millet-seed or miliary granulation: these may be detected, from their hardness, by running the finger on the surface. They are likewise transparent, and are developed in the texture of the membrane with which they may be separated from the subjacent tissues.

Although the stomach and rectum are the portions of the alimentary canal in which tubercles are least frequent, yet they are the parts where the cancerous and medullary degenerations are most common. When these become considerable, no trace of the muscular coat remains, and the mucous membrane, having become disorganized, forms the ragged edges of an ulcer, the base of which is formed by the softened cancerous tissue. In a few cases, the cancer commences in the mucous coat itself, which becomes soft, thick, and ulcerated; sometimes it forms a fungous excrescence, united by a stalk to the mucous membrane.

Another diseased structure of these parts is described under the appellation of *erectile tissue*. These are small roundish bodies, of a brown colour, connected to the internal surface of the bowels by a pedicle, and which exude fluid blood of a dark colour. On a more minute examination, they are found to consist of a set of filaments intersecting each other, so as to leave interstices of various form and size. These tumours are rare, and, when they occur, only one or two are found in the whole canal.

M. Andral next describes what he calls *melanosis of the intestines*: this consists of small black tumors under the mucous membrane, about the size of a nut. In the small in-

testines an immense number of black spots is sometimes found, covering the mucous coat to the extent of several feet: these exist in all conditions of this membrane, and M. Andral thinks that they are not accompanied by any morbid symptom.

M. Andral maintains the existence of œdema of the intestines, which was denied by Bichat.

Pathology.—Many seem to have some difficulty in perceiving the difference between Morbid Anatomy and Pathology, using these terms indiscriminately. To such we recommend the perusal of Dr. PRING's "Exposition,"* lately published. This work is the only one expressly on Pathology which has appeared within the last six months, and consists of an able and learned, but abstract, and perhaps too elaborate, examination of the leading doctrines which have at different times constituted the systems of the schools, together with original views and illustrations of various pathological principles. The nature of this essay prevents us from being able to enter upon so wide a field, but we shall take a future opportunity of recurring to the subject.

Dr. CRAIGIE, of Edinburgh, has devoted considerable attention to the pathology of the *brain*, and the principal facts which he has recorded are to be found in our last volume. In a continuation of his paper,† he insists at some length upon the connexion subsisting between morbid affections of the brain and diseased conditions of the heart and great vessels. We believe it will not be new to our readers in general to learn that organic mischief at the centre of circulation proves a frequent cause of apoplectic seizures; but, at the same time, this connexion has not been pointed out so distinctly by preceding writers as to render the observations of Dr. Craigie superfluous. The conclusions at which he arrives are as follows:

* An Exposition of the Principles of Pathology and the Treatment of Diseases. By DANIEL PRING, M. D. &c.

† Edinburgh Med. and Surg. Journal, January 1823.

“ 1st. It is quite obvious that several maladies of the heart, such as ossification of the left side, or of the artery connected with it; ossification of the mitral valve; of the semilunar valves; arctation of the apertures, either auriculo-ventricular or aortic, have a tendency to terminate in extravasation within the cranium, producing apoplexy, paralysis, or a comatose state terminating in death.

“ 2d. It is equally obvious that, although examples of disease of the head, affection of the brain and its membranes, occur spontaneously, yet not a few are the result of a disturbed or irregular state of the circulation, induced by disease of the heart or its appendages. This connexion has not been examined so often as it merited; and there is strong reason to believe that, if made the subject of particular investigation, it would be proved to be much more constant and uniform than has been anticipated.

“ 3d. It is by no means difficult to see how these effects in the cerebral organ result from an irregular and disordered action of the heart. The difficulty which the blood experiences in passing either, 1st, through the auriculo-ventricular opening, 2d, the aortic orifice, 3d, along the aorta, necessarily produces a stagnation and congestion,—1st, in the pulmonary veins; 2d, in the pulmonary artery; 3d, in the right side of the heart. The effect of this is to retard or impede very remarkably the return of the blood from the cerebral veins, and consecutively either to distend them, or, unless they are remarkably strong and resisting, to rupture them, or to occasion an effusion of the serous part of the blood, as we find in other examples of obstructed venous circulation.”

That *tubercles*, if they be neither numerous nor large, may lie dormant in the lungs for a longer or shorter period, is an opinion advanced by most writers; but Dr. BARON carries this idea further,* and supposes that these bodies, when

* Illustrations, &c. quoted above.

once they are fully consolidated, do not subsequently pass into a state of suppuration, and, of course, that such consolidation is to be desired as a favourable termination of the disease.

“ The consolidation, therefore, just referred to may, in some measure, be considered as a favourable termination to tubercle, as life has been found to be compatible with their existence, except in cases where they occupied a large proportion of the lung, or produced accretion of the membranes. It is in that period of their progress which is intermediate between the state mentioned and their first development, that all the symptoms characteristic of tuberculous phthisis occur. This will be apparent by attending briefly to the ordinary progress of the disease.

“ In a person who has tubercles, a frequent cough without any expectoration, but with occasional oppression about the chest, and hurried respiration, or slight exertion, may exist at intervals for many months, or even a longer period, without any other sign of disease. What is commonly called a fresh cold may increase these symptoms and render them more permanent, and then the patient, who never expectorated before, may perhaps be surprised by spitting up a yellowish or whitish globular shaped mass, tinged with blood, or a gush of blood may precede an occurrence of this kind. I have known the last-mentioned symptom repeatedly happen, to a most alarming extent, in a case where there was great destruction of the pulmonary tissue by the consolidation of tubercles, but where, though the case proved fatal, there was never any expectoration of the matter from tubercles. It is from this and other kindred cases that I infer that tubercles, once consolidated, do not subsequently suppurate or ulcerate.”

This doctrine, our readers will at once perceive, is diametrically opposite to that advanced by M. LAENNEC, who, while he admits the incurability of phthisis in its early stages, is convinced “ that, in some rare cases the disease is curable in the latter stages; that is, after the *softening* of the tubercles, and the formation of an ulcerous excavation:”

and again, "The tubercles of the lungs differ in no respect from those situated in the glands, and which, under the name of scrofula, after being softened and evacuated, are often followed by a perfect cure."*

Some cases have been related in which the *thoracic duct* has been more or less obstructed, but the only case in which the obliteration was complete, with which we are acquainted, is to be found in a recent German publication ;† and, as such cases must be regarded as extremely rare, even should we be mistaken in regarding the present one as unique, we shall detail the particulars.—A workman, fifty-eight years of age, became a patient at the hospital at Bonn, in March 1821, under the care of Dr. NASSE. He laboured under dropsy : his countenance was expressive of great anxiety ; his respiration oppressed, and accompanied with cough ; the pulsation of the heart was soft and feeble ; the appetite was impaired, and the thirst increased. The belly was tense, and fluctuation was perceptible ; the urine scanty and high-coloured, and the hypogastric region painful ; the stools scanty ; and the lower extremities much swelled. Two months before his admission, this patient had experienced chills, with fulness about the hypochondria, and tendency to vomit. The swelling began at the pubis, extended over the rest of the abdomen, and was soon followed by œdema of the legs. The water, amounting to twelve pints, was evacuated by puncture : tonics and sudorifics were administered, with but little benefit. The belly began to swell again, with pain, increased by pressure, stretching from the pubis to the umbilicus ; the skin was loaded with a dry, itching, papular eruption. The appetite increased, while the emaciation and debility continued to advance. Eight days before death, no pulse could be felt in the left arm, which was paralyzed, and this side was more swelled than

* FORBES'S Translation of LAENNEC, pages 17, 43, and 44.

† Leichenöffnungen; zur Diagnostik und Pathologischen Anatomie. FREDERICK NASSE, M. D.

the other; lastly, diarrhœa supervened, and he died on the 25th of April. On opening the body, the pylorus was found to be scirrhus, the liver much enlarged, and the viscera of the thorax and abdomen in general loaded with white tubercles. After removing the contents of the chest and abdomen, a cord, of the size of a goose-quill, was observed situated on the bodies of the vertebræ, and ascending from the lumbar region into the thorax, between two rows of tumors: this cord terminated at the junction of the left subclavian and jugular veins, from which it was inferred to be the thoracic duct. There was no trace of its canal left, the whole interior being filled with a white mass; the coats were thickened, but the valves could be distinguished, still retaining much of their natural appearance. As there are none of the symptoms which may not be accounted for by the other morbid appearances, without reference to the state of the thoracic duct, we fear no practical inference can well be deduced from this case. Dr. Nasse seems rather disposed to attribute the disease to venereal origin, an idea altogether improbable.

Dr. SCOUTETTEN, of Metz, has published some Anatomico-Pathological Researches,* the object of which is to show that an intimate connexion exists between irritation of the mucous membrane of the alimentary canal and the pia mater, which he denominates *meningine*, after the nomenclature of M. Chaussier. He endeavours to account for the fact of this mutual connexion not having been more insisted upon by practical writers, upon the supposition of their overlooking the diseased states of this delicate membrane, from the changes not being very conspicuous to a superficial observer. In its natural state, he informs us that the pia mater is perfectly transparent, thin, colourless, and without adhesion; and, consequently, whenever this is not the case, that it must be diseased. Here, at least, the re-

* Journal Universel des Sciences Medicales, Decembre 1822.

marks of Dr. Scoutetten deserve attention, as there are doubtless minute deviations from healthy structure which require an experienced eye to detect them; and his recommendation that we should bring into immediate comparison the parts supposed to be diseased with similar parts known to be healthy, cannot but be regarded as desirable wherever it is possible: this was the method adopted by M. Wenzel in examining the brain of epileptic subjects.—According to Dr. Scoutetten, all parts of the intestinal canal do not sympathise to the same extent with the meninges: thus the stomach and small intestines possess a closer affinity with them than the great intestines. And, further, he supposes that the various coats of the intestines possess relations to the head entirely different: thus, while inflammation of the mucous membrane gives rise to corresponding action in the pia mater, this last remains free from all sympathy in peritonitis, although so severe as to prove fatal. When the mucous membrane of the stomach or small intestines is inflamed, the pia mater has its vessels injected with blood, forming red patches, and sometimes giving rise to extravasation. These appearances, according to Dr. Scoutetten, are chiefly found in the anterior and lateral parts of the brain, unless the abdominal inflammation be very violent, in which case nearly the whole of the *meningine* corresponds in its action,—its minute vessels carrying red blood, giving rise to effusion and adhesions. The author likewise thinks that his views are calculated to explain many of the phenomena of apoplexy, on the principle of every inordinate excitement of the stomach being communicated to, and as it were repeated in, the brain: thus occasioning determination of blood to the head, and rendering the vessels gradually weaker, and more ready to be ruptured by increased action.

The state of the *digestive canal* in diarrhœa, dysentery, and lientery, has received important illustration from the researches of M. ANDRAL, fils.

"These affections (says he,*) have been for a long time looked upon as diseases entirely independent of inflammation of the intestines. Many ancient authors have, in truth, spoke of the ulcerations seated at the internal surface of the digestive tube in chronic diarrhœas, but they consider them as an effect of the diarrhœa. Such was the opinion of Boerhaave, and of Van Swieten, his commentator. We have already seen that such also was pretty nearly the idea of Stoll; and it may be likewise found in the writings of Hippocrates. He was not ignorant that in dysentery the intestines are the seat of more or less deep ulcerations, but he regarded them as being occasioned by degenerated bile and phlegm.

"Is relaxation of the bowels constantly connected with an inflammatory condition of the mucous coat of the intestines? This is a very important question in a therapeutical point of view. We shall endeavour to answer it by presenting a summary of the numerous cases which we have collected on the subject.

"We have several times found, in individuals who had laboured under recent or chronic diarrhœa, the internal surface of the intestinal canal very pale in its whole extent, the mucous coat having preserved its thickness and ordinary consistence. Patients weakened by long organic diseases, hydropics, old people under that state of debility denominated by the ancients cachexia, and who succumbed after having laboured, for a longer or shorter time, under considerable looseness, frequently present that state of the intestinal canal. Their stools are copious, very liquid, purely watery; surpassing by much the quantity of liquids taken in. We have sometimes found, in cases of this kind, a well-marked serous infiltration of the sub-mucous cellular tissue.

"Morgagni has transmitted to us the history of several cases of diarrhœa, without inflammation of the mucous coat of the intestine. He had seen several individuals labour-

* *Nouveau Journal de Medicine*.—We avail ourselves of the translation in our respected cotemporary, the *Medical Repository*, Number for June.

ing under that disease die in a short space of time, exhausted by excessive abundance of their alvine evacuations. In these atonic diarrhœas, the internal parietes frequently become much extenuated; the fleshy coat, especially, experiences a true atrophy, and occasionally seems to be only composed of some pale and small fibres, widely separated from each other. Bonet had already remarked this fact. 'In chronic diarrhœa, (says he,) we find the intestines as thin as a cobweb.' The intestine, in this state, seems to be unable to fulfil its functions: chylication is but imperfectly performed, absorption becomes much less active, and the food is frequently voided as when taken. This is what the ancients designated under the name of *lientery*.

"The mucous coat of the intestines may then, like many other textures, become the seat of a much more abundant secretion than usual, although it presents no trace of inflammation. It is thus that, during convalescences from chronic maladies, the exhalation of serosity into the subcutaneous cellular tissue is frequently augmented. It was not, therefore, without reason that Sauvages designated under the name of *flux* a particular class of diseases.

"Since truly atonic fluxes may exist, it follows that a strengthening and astringent treatment is, in these circumstances, the only proper plan to be pursued. Thus the œdemata, of which we shall presently speak, may be dispersed, either by the employment of topical stimulants, or by the internal administration of tonic medicines.

"In other individuals, we find the mucous coat of the intestines equally white in its whole extent; but beneath it numerous tubercles, or other adventitious tissues, exist. They provoke diarrhœa, either by the sympathetic irritation which they determine to the mucous membrane covering them or by stimulating by their presence the muscular coat, the contractions of which consequently become more rapid and more intense. It is in this manner that the different adventitious tissues, developed in the parenchyma of the lungs, provoke an habitual irritation of the mucous membrane of

the bronchiæ ; but, most commonly, the diarrhœa in this case does not appear to become permanent and considerable, until the period when the tubercles, having become softened, inflame and ulcerate the mucous coat.

“ It is moreover indubitable, that, in a very large majority of cases, the intestines of individuals labouring under diarrhœa, whether complicated or not with dysenteric symptoms, present evident marks of phlegmasia.

“ This phlegmasia may be seated in the small or in the large intestine.

“ In the small intestine, it frequently only exists to the extent of some fingers' breadth above the ileo-cæcal valve ; at other times a larger portion of the small intestine has laboured under it, where it either appears under the form of simple injection of the mucous coat, alteration of its texture, red or white softening of its tissue, or ulceration.

“ Numerous cases have apprised us that acute or chronic diarrhœa is the frequent result of isolated inflammation of the small intestine, without the large participating in it in any manner. We insist on this fact, because M. Broussais has laid down, as a general principle, that enteritis is accompanied with constipation, and that diarrhœa only supervenes when enteritis is complicated with inflammation of the colon (*colite*).

“ Of the three portions of the great intestine, the cæcum is that which, in diarrhœa, most frequently presents one of the three degrees of inflammation ; after that the colon ; and, lastly, the rectum.

“ The symptoms, the *ensemble* of which constitutes dysentery, are not connected with any particular state of the intestines. The tenesmus alone announces that inflammation exists in the rectum. As for the bloody and glairy stools, they appear in individuals whose intestines present lesions analogous to those which are observed in other patients whose stools had always been purely watery.

“ We once found a somewhat considerable number of ulcerations in the ascending colon, in a phthisical patient, who,

after having previously laboured under diarrhœa, had not felt it for a long period, and had even become constantly constipated. It may be conceived that this may be the case when the ulcerations are small, by no means numerous, and when neither the edge nor the base is inflamed. In fact, at such times they can only, like tubercles, produce a flux by the sympathetic irritation of the mucous coat surrounding them, or of the muscular coat.

“The different states which the digestive tube may present in diarrhœa being well known, can they be distinguished during life from the symptoms which manifest themselves? This, in many cases, is possible. Thus, if pains of the abdomen are observed,—if the skin is burning hot, the pulse frequent,—if the dejections are slimy, membraniform, or bloody, we may be satisfied that the intestine is the seat of more or less intense inflammation.

“We may add, however, that nothing is more common than the absence of every species of pain in cases where numerous ulcerations cover the internal surface of the intestines, whether of the ileum, cæcum, or colon. How frequent also is it on the other hand, to see patients complain of violent pain in the abdomen, although the digestive mucous coat is not the least inflamed. Is not this the case, as the success of the treatment confirms, in lead-colic, which is cured by the employment of the most active drastics,—in the colics termed nervous, which frequently yield to eminent stimulant medicines,—and in those which are owing to accumulation of flatus and of fecal matters, and which are treated with so much advantage by repeated purgatives? Stoll has cited a remarkable case of syphilitic intermittent colic, which yielded to the use of corrosive sublimate.

“We have already seen that intestinal tubercles may arise, become developed and softened, without any pain indicating their presence.

“The character of the stools is not always itself a certain sign by which we can recognise inflammation. Sanguineous evacuations have been observed to take place *per anum*,

in individuals whose intestinal mucous coat was found sound after death. These passive hæmorrhages are analogous to those which take place in many dropsical individuals, at the internal surface of the serous membranes of the chest and abdomen; they are similar to the hæmorrhages of which the skin, the cellular tissue, and the synovial membranes, become the seat in scorbutics.

“The serous dejections, resembling water, coloured yellow or green, manifest themselves equally in all possible conditions of the digestive tube,—in the cases where it is ulcerated, and in those in which its parietes are pale, thin, and œdematous (*infiltrates*).

“When even ulcerations exist in the intestines, ought they to be regarded as a constant obstacle to the employment of tonic and astringent substances? They present such a great variety in their nature, that it seems the same method of treatment cannot agree with all.

“The white, grey, or brown colour of the base,—the nature of the secretion which takes place there,—the want of, or the considerable thickening of, the laminated tissue which forms it,—the appearance and disposition of their edges,—the different degrees of consistence, of thickening, and of colour, of the mucous coat which constitutes them,—the separation of this membrane to a greater or less extent,—its state in the spaces between the ulcerations,—are they not so many circumstances which seem to demand a multiplicity of modification in the treatment? We may thus easily explain how any curative method succeeds very well in one case, and completely fails in another. We have seen, for example, several diarrhœas yield to the decoction of catechu; we have seen others increase, and become aggravated, during the administration of this medicine, although in both cases the symptoms were nearly the same, and the patients placed in nearly similar general circumstances: the major part were consumptive individuals. It would frequently be of great importance, could we, in the same portion of intestine, apply an astringent or tonic substance upon the ulcera-

tions, and cover with emollient applications the spaces which separate them, and reciprocally. In this manner the surgeon acts in the treatment of several ulcers situated on the surface of the body. He heals them by endeavouring to keep up inflammation to a certain degree, above and below which the disease cannot proceed towards resolution. Is it not, again, by the employment of topical astringents that many chronic ophthalmiæ are cured? Is it not, also, by the employment of resinous substances that chronic phlegmasiæ of the mucous membrane of the lungs and urethra may be very successfully treated? We have very frequently seen M. Lerminier have recourse, with marked advantage, to a slightly stimulant treatment towards the end of acute pneumonia, having a tendency to pass into the chronic state."

The account given by Mr. TRAVERS* of the symptoms which occurred in the late Dr. Pett, from a wound received in dissection, will be read with much interest. This gentleman had assisted in examining the body of a lady who died of peritoneal inflammation; the wound (situated on the middle finger of the right hand) was so slight as to escape observation, till the occurrence of pain during the same evening led to a minute examination. It is remarkable that the application of nitrate of silver, and subsequently of strong sulphuric acid, produced no sensation in the first instance, although a second application of the lunar caustic was soon followed by intense pain. Next morning, "the finger was white and without sensation." The accident took place on Saturday, and by Tuesday the arm had recovered its natural state, being neither swollen nor painful; but a considerable effusion had taken place into the axilla and over the pectoral muscle; the swollen part was covered with an erythematous blush, painful, and "crepitated on pressure, as in emphysema." Dr. Pett died in 105 hours after the injury had been inflicted; great nervous irritability and anxiety having

* London Med. and Phys. Journal, February.

accompanied the progress of the malady. No light was thrown on the phenomena by the post-mortem examination.

This case bears a considerable analogy to those related by Dr. COLLES, in the third volume of the Dublin Hospital Reports; an account of which is to be found in the 48th volume of this Journal.*

The *effects of putrid matters*, when applied to the living body under different modifications, formed the subject of an interesting essay by Dr. GASPARD, in the second volume of the Journal of Physiology.—Similar experiments, and with similar results, have more lately been performed by M. MAJENDIE,† who succeeded in producing, within a few hours, various maladies similar to those resulting in man from exposure to putrid exhalations. Vomiting, for example, and black stools, were produced by the introduction of putrid injections into the sanguiferous system. In pursuing these inquiries, Majendie found that different kinds of flesh acted with different degrees of power during their putrescent state: thus, the muscular fibre of herbiferous appeared much less active than that of carnivorous animals; but, of all substances, the most deleterious was water containing putrid fish,—some drops of this producing, within an hour, symptoms having a great analogy to those of typhus or yellow fever. Death generally took place in twenty-four hours; and, on opening the body, all the traces were found of the blood having undergone chemical change, as it remained in great part fluid, and had transuded, in an unwonted degree, through the different textures, particularly the mucous membrane of the intestinal canal. It is remarkable, although not at variance with the analogy of other poisons, that the same putrid water received into the stomach was entirely harmless; a result which Majendie attri-

* While this sheet was passing the press, another instance of death from this cause occurred in London: if possible, we shall lay the particulars before our readers in a future number.

† Journal de Physiologie, Janvier 1823.

butes to the mucus of the parts acting as a filter, preventing the passage of the more solid part of the putrid matter: by filtering the water through paper, much of its virulence was lost. Another form of the experiment consisted in exposing animals to the action of putrid effluvia: some suffered no apparent injury, while others, as dogs, became rapidly emaciated, and died at different periods within twenty days. The prosecution of these experiments may possibly throw some light on points of pathology at present involved in utter darkness.

Various pathological facts seem to show the existence of similar diseases in man and the lower animals, and a new example of this kind has been recorded within the period allotted to our present observations.* A person lately presented himself at the Royal Infirmary of Edinburgh, having a sore on his arm, produced, according to his own account, from touching the leg of a horse affected with *farcy*. An ass was inoculated in the leg with the matter from this man's arm, and a disease was brought on supposed to be *farcy*, as symptoms of the glanders appeared some days after, and proved fatal. On dissection, the usual morbid changes were found; among others, the ulceration of the septum of the nostrils, regarded as characteristic of this disease.—Many of our readers are probably aware that a veterinary surgeon in this metropolis had the misfortune, a few years ago, to become inoculated by the matter of *farcy* from a horse, and fell a victim to the disease under circumstances particularly distressing.

SEMIOLOGY.

No work expressly on this subject has lately appeared, and our remarks must therefore be very limited: indeed, the only disease the symptomatology of which has been the subject of particular investigation, is *puerperal fever*. This has

* Edinburgh Med. and Surg. Journal, January 1823.

been discussed with much zeal by our northern brethren since the period of our former Essay, although, we regret to say, without such satisfactory advancement of our knowledge as might have been expected. This does not proceed either from want of talent or want of opportunity among them, but because they have not agreed about what is to be called puerperal fever, and what peritonitis, in lying-in women. Until this is done, it is obvious that satisfactory results cannot be attained; for at present it is notorious that what one man calls puerperal fever another denominates peritonitis, and *vice versa*. Our present purpose, however, is not to review opinions, but to state them; and, accordingly, we proceed to give the symptoms which indicate the puerperal fever of Drs. CAMPBELL* and MACKINTOSH.†

The disease, in the great majority of cases, is said to come on within the first three days, and to be ushered in by rigors and other febrile symptoms. This is quickly followed by pain in the abdomen, the exact seat of which has been differently described by various authors. Dr. Campbell says, "In all my cases, there was pain in the hypogastrium at the commencement of the disease, darting into one or both iliac regions. In a few examples of this affection, patients described the pain as having commenced in one or other of the iliac regions, and extended towards the uterus, which organ felt enlarged, and was exceedingly sensible upon pressure. In my practice, therefore, I can with confidence assert that the pain, in the beginning of this affection, was chiefly confined to the hypogastric and iliac regions. Patients never complained of it in the umbilicus or epigastrium, except in one case, until the disorder had continued for some time; and I am firmly of opinion, that those writers who describe the

* A Treatise on the Epidemic Puerperal Fever, as it prevailed in Edinburgh, in 1821-2. To which is added, an Appendix, containing the Essay of the late Dr. JORDAN on the Puerperal Fever of Aberdeen, in 1789-90-1-2. By WM. CAMPBELL, M. D. &c. &c. &c. 1822.

† A Treatise on the Disease termed Puerperal Fever, illustrated by numerous Cases and Dissections. By JOHN MACKINTOSH, M. D. 1822.

pain as having been chiefly seated in the epigastric region, in some instances, at the commencement of the disease, must have deceived themselves by confounding its stages."

Such is the seat of pain at the commencement; but, if the disease be not speedily arrested, it gradually extends to the umbilicus, and thence into the epigastric region: having intervals of remission, followed by exacerbations of great violence. Even from the beginning, some degree of tumefaction is perceptible about the abdomen, and this increases with the progress of the disease, sometimes until it becomes as prominent as before delivery. The uterus can generally be felt above the pubis, is extremely sensible to the touch, and, according to the opinion of Dr. Campbell, undergoes actual enlargement. The pulse becoming quick is regarded by this author as the first symptom which denotes the threatened evil; and, when the disease is fairly established, it rises to 110, 120, or 130; is sometimes full, but more frequently hard, being contracted, and sometimes intermitting, in the progress of the disease. The tongue is generally white and moist, the edges and raphe being sometimes of a fiery red. Nausea prevails in the commencement, and subsequently vomiting; the matter ejected consisting first of phlegm and ultimately resembling coffee-grounds. The evacuations by the bowels vary in appearance, being dark brown, grey, or ash-coloured, generally frothy, and extremely fœtid; the purging is accompanied with severe griping pains. One of the symptoms regarded by Professor Hamilton as pathognomonic, is the presence of the lochial discharge, which he asserts is *never* suppressed in genuine puerperal fever. Dr. Campbell's opinion is thus expressed:

"Some say that there is more or less of a suppression of the lochia in every example of the disease; others, again, that it is altogether suppressed in some cases; while the distinguished Professor Hamilton declares that it does not suffer any change, and that the disease cannot be puerperal fever where the uterine discharge is suppressed. My experience corresponds in some measure with this eminent in-

dividual; for in all my cases, except one, the uterine discharge was always present to some extent; and I have since been of opinion, that I had in this instance suffered myself to be deceived by the attendants, who often say that the lochia are suppressed when they really are not. Although this discharge continued to flow, to use the words of a celebrated author, there was always 'more or less of a suppression of it;' and this was particularly conspicuous immediately after the accession of rigors,—a change naturally to be expected, as all the secretions are diminished during febrile excitement, not only in the puerperal state, but on every other occasion. I would not, however, wish it to be understood, that I should be so illiberal towards my brethren as to insinuate that they have allowed themselves to be deceived in all their cases; for I should suppose that there are deviations to be remarked in the lochia, as well as in every other symptom of the disease."

So entirely satisfied is Dr. Campbell of the accuracy of his diagnostic characters of this disease, that he thinks a practitioner ought to be brought under the cognizance of the law for ignorance, should he treat for any other disease than puerperal fever, a lying-in woman who had "acute fixed pain in the lower part of the abdomen, aggravated on pressure, or a general soreness of the abdomen, rendered more acute by pressure; accompanied with frequent pulse, hurried inspiration, and much uneasiness on turning to either side in bed."

STATISTICAL MEDICINE.

For various reports relative to the diseases prevalent during the last six months, we refer to our preceding Numbers. Probably the most interesting question which occurs in this department of our Essay relates to the state of *small-pox* and *vaccination*; but on this subject we are unwilling to enter. We have already laid before our readers Reports from the National Vaccine Board, and from the Physician to the Small-Pox Hospital.

The sickness which has lately prevailed to such an alarm-

ing extent in the Penitentiary at Millbank will probably occupy some of our attention, as soon as the Minutes of the Evidence before the House of Commons have been printed.

Since our review on the subject of the *Barcelona fever* a work has appeared,* which should certainly have obtained a place in our Analytic Department, had we not so recently discussed the bearings of this question. As it is, we embrace the opportunity of laying before our readers the opinions of Dr. O'HALLORAN on the origin of the yellow fever in the south of Spain; opinions derived from zealous investigation on the spot.

"The occurrences which preceded the appearance of the epidemic of Barcelona in 1821, correspond with the old and recent observations on a similar subject in other countries; it almost invariably happening that the yellow fever of Spain is preceded by unusual diseases of various form and force,—more particularly by bilious remittents, which are not unfrequently so aggravated and malignant that physicians themselves do not venture to define the line of demarcation between them and the avowed epidemic.

"This want of decision, or confession of inability to judge conclusively of the true character of the disease, occasioned considerable controversy in Barcelona. The medical faculty could not correctly ascertain the precise period at which the endemic bilious remittent ceased, and the real epidemic fever began. The difficulty was embarrassing; for, although the question has been the subject of much unpleasant controversy, it is not yet decided to the satisfaction of the public where the difference lies. This uncertainty among physicians, as to the nature of the disease at its first appearance, is no inconsiderable proof of the analogy which subsists between the endemic bilious remittent and the epidemic yellow fever. A fever, bearing some of the diagnostic marks of this last disease occurs annually in this city. The

* Remarks on the Yellow Fever of the South and East Coasts of Spain, &c. &c. By THOMAS O'HALLORAN, M. D. 1823.

first cases which appeared in 1821 passed unnoticed, or were considered only as the ordinary diseases of the season, and treated as such. A few weeks subsequent to the appearance of these aggravated cases, and when it was discovered that a formidable form of malady prevailed in the place, some of the physicians, and the majority of the people, unwilling to acknowledge that a malady of such malignity had its origin among themselves, conjured up a tale of importation, ascribing to intercourse with the infected subjects of shipping, &c. the sickness and deaths which took place in the month of July.

“ The first deaths, according to report, occurred on board a Neapolitan sloop of war, which anchored in the harbour of Barcelona, on the 23d of April, (a cruiser in the Mediterranean,) and on board the frigate Liberty, lately from America ; at least these were the first noticed by the government: and, according to the prevailing notions of contagion and importation, suspicion attached to the vessels which had lately arrived from the Havannah. Much has been said on the subject of importation in this instance; but no one has attempted to prove the fact by distinct evidence. The probability only is admitted, and the importation has been fixed, by supposition only, on the following vessels:

“ 1. The brig Talla Piedra, Captain Narcisco Paris, sailed from the Havannah on the 28th of April, 1821, with a cargo of sugar, coffee, logwood, and tobacco; touched at Carthagea on the 12th of June, landed two passengers, and took another on board. She finally arrived at Barcelona on the 19th of June, where she got pratique, after having performed eight days' quarantine.

“ 2.. Brig Nuestra Senora del Carmen, Captain Don Pablo Soler, sailed from the Havannah on the 28th of April, 1821, with a cargo of sugar, wax, coffee, logwood, and tobacco. This vessel arrived at Carthagea on the 16th of June, obtained pratique; disembarked her second pilot. She arrived at Alicant on the 29th, where she unloaded part of

her cargo, embarked a passenger, and, finally, cast anchor in Barcelona harbour on the 11th of July.

“ 3. Brig *Grand Turk*, Captain John Segreras, sailed from the Havannah on the 28th of April, 1821, with a cargo of sugar, pepper, coffee, cotton, and bullion. She arrived at Cadiz on the 5th of June, where she obtained pratique; disembarked twenty-four passengers, embarked four others and three sailors; and, finally, arrived at Barcelona on the 29th of June.

“ 4. The Spanish frigate *Liberty*, Captain James Sinderras, sailed from the Havannah on the 28th of April, 1821, with a cargo of coffee, cocoa, tallow, rum, and bullion. She arrived at Malaga on the 8th of June, obtained pratique, and disembarked part of her cargo; touched at Carthegena, where she also disembarked a part of her cargo, a passenger, and a sailor; and, finally, arrived at Barcelona on the 28th.

“ The above-named vessels are those to which suspicion has been attached, as being the vessels in which the yellow fever was imported. They sailed from the Havannah in a fleet consisting of fifty-two sail, for the following ports: viz.—thirteen for Cadiz, twenty for Barcelona, six for Corunna, three for Santander, four for Malaga, one for Vigo, one for Ferrol, one for Bilboa, one for Palma, one for Lisbon, one for Bahia.

“ According to the creditable testimony of Mr. Bruno Vidal, an officer of the Spanish army, who returned to his native country in a vessel belonging to the fleet in question, the inhabitants of the Havannah enjoyed good health prior to his departure; there being only a few slight cases of the usual fever of the season in the town, and those confined to newly-arrived Europeans, particularly sailors. It appears also, from an official document which I have now before me, that only three deaths occurred in that part of the fleet destined for Barcelona, during the voyage; and that no suspicion has been attached to the vessels in which the deaths took place.

“ The history of the disease among the shipping in Barce-

lona harbour is involved in obscurity, or rather total darkness. There is no clear evidence, nor authenticated fact, to prove the reports in favour of importation; but, notwithstanding this deficiency, the whole of the authorities, a few of the physicians, and the mass of the people, maintain with obstinacy that the disease originated on board the ships from America, and diffused itself in the town, in consequence of newly-imported contagion. It is stated, as I before remarked, that the disease, according to report, made its first appearance on board a filthy Neapolitan vessel, lately arrived from some port in the Mediterranean. This is report, but it is not of reliance; for the fact is well authenticated by the British vice-consul, (who resided in the Plaza de la Constitucion, which commands a view of Barceloneta,) and supported by the most eminent physicians of the city, that several deaths took place in Barceloneta and Barcelona, at points distant from the supposed source, as soon, if not prior, to the deaths on board ship. The disease was not at that time regarded as yellow fever; but the attending physicians now declare that it was analogous to what was afterwards known under that name. The physicians of Barcelona, it may be observed, had not the opportunity of treating the yellow fever before this season; and on that account much controversy arose respecting its character, and the name by which it ought to be designated. It was only on the 14th of August that it was decided to be the yellow fever of America, but not contagious. In consequence of this decision of the Board of Health, the port was lined with troops, all communication with the shipping was cut off, the sick were removed to lazarettos, and the usual precautions against presumed contagion were regularly adopted.

“The authorities, perceiving the slow and gradual progress of the malady, and willing to make the public believe that it was wholly confined to the port, declared in the public papers that they had it within their control, and consequently that it should be brought to obedience. The promise was bold, but not wise. Force of arms was of no avail;

the disease started up in different parts of both towns, without a possibility of ascertaining from whence it came. The futility of guards became obvious; the troops were removed from the port, and the gates of the city were closed against the inhabitants of Barceloneta. After that was done, the malady spread with extraordinary rapidity in Barceloneta, and in that part of Barcelona which skirts the port: scarcely an individual escaped who was long exposed to the atmosphere of these localities; for there the morbid cause would seem to have been concentrated in a singular degree. From Barceloneta the disease marched in a westerly course through the centre of Barcelona, diminishing in activity as it proceeded outwards. It was finally lost before it reached the north-west extremity of the city; and, beyond a given limit, the epidemic character ceased, or only appeared by accident.

“ The circumstances which lead to the rejection of the doctrine of importation are strong and numerous, in so far as respects the epidemic of Barcelona, as well as in every other. I shall state them in as concise a manner as possible.

“ 1st. Before the importation of yellow fever from Havannah to Spain can be admitted as probable, it must be proved that there existed at that place a contagious fever, of similar character to the disease in Spain, at the time of the departure of the fleet. Without this, the supposition of importation is a mere gratuitous assumption, contrary to reason, and repugnant to common sense. Yellow, or concentrated endemic fever, I believe, never prevailed at the Havannah in the month of April; the disease commonly taken for it being the bilious remittent, which attacks Europeans, newly arrived, at all seasons of the year, but which rarely, if ever, attacks persons at that season of the year whose constitutions are assimilated to the climate. The form under which this disease appears on such occasions, is generally remittent; sometimes so obscure, indeed, in its periodical movements, as to resemble the concentrated endemic of the autumnal months; but, however dangerous

and complicated in its mode of proceeding, it never yet, I believe, has been considered to be contagious,—at least it has not been thought so by experienced men. If this be the case, and the fact is founded upon the authenticated evidence of learned physicians of all nations, it is clear that the material which produced yellow fever at Barcelona could not be imported. It is generally acknowledged that the yellow fever of South America or the West Indies is not contagious at any season of the year, or under any circumstances of management; in confirmation of which opinion it may be necessary to adduce a fact, which proves to a demonstration that the disease is not exportable. There never has been an instance of its propagating in well-ventilated hilly situations in the interior, even at the small distance of three miles from Vera Cruz. The noxious cause is circumscribed to a certain locality. Thousands of instances are on record of persons who contracted the disease in town dying in the country, without a solitary example of its affecting the most assiduous of the attendants. If the disease, then, be not contagious at its origin, how can it be imported, and so changed in its nature as to assume a different character in a foreign country?

“ 2d. It, moreover, appears extraordinary how it could have happened that the crews of vessels carrying this noisome pestilence survived, and even preserved good health during a long voyage; or how they could, after having touched at different ports, discharge part of their cargoes in places that had formerly suffered from the yellow fever, without a single instance of injury being produced by the intercourse. If the cause of disease were actually on board, this is inexplicable. Cadiz, Malaga, Almeria, Alicant, and Carthegena, &c. &c. &c. were more exposed to injury from the intercourse which took place between the crews of the vessels alluded to and the inhabitants of the above-mentioned places, than Barcelona, a port situated at the eastern extremity of Spain; yet they escaped.

“ 3d. Had the disease been an imported contagious dis-

ease, it would have propagated in any atmosphere, in any town, and under any condition of climate. Its ravages would not be confined to one spot, as was the case in the present epidemic; for even parts of the infected city were exempt from sickness, where no precaution was taken to guard against its inroad; and numerous villages, towns, and country houses, where individuals, who exposed themselves to the epidemic cause at its source, sickened and died, without detriment to the mass of their neighbours, or to their own immediate attendants. This could not have been the case had the disease been imported as a contagion. It would have retained its original character: the power of propagation, though modified by locality, season, or temperature, would not have been annulled.

“4th. Had it even been proved that a disease prevailed at the Havannah of a contagious nature, at the time these vessels sailed for Europe, and that a portion of the contagion had been embarked on board, it is still evident, even according to the doctrine of the advocates of contagion, that the period between the departure from the Havannah and the arrival in old Spain is tantamount to a quarantine of the most extended duration, with the additional advantage of constant strong ventilation from the high winds which usually occur at sea.

“5th. As it is an undeniable fact, not disputed by the most prejudiced contagionist in Spain, that cold invariably destroys the epidemic yellow fever of that country; and as ships, in their return from the Havannah to the continent of Europe, are exposed to more intense cold than is experienced at the sea-coasts of Spain at any season of the year, it appears unaccountable why a similar effect is not produced by a similar cause; or why excessive cold does not act on the germ of a disease on ship board, which it absolutely extinguishes on shore even in a few days.

“Lastly. The departure from the Havannah of the ships in question with clean bills of health,—the trifling sickness and mortality which took place on the voyage,—the touch-

ing at other ports before they arrived at Barcelona, without any suspicion of communicating contagion to these ports,—and, moreover, their speedy admission to pratique at Barcelona itself, are circumstances which still further divest the Havannah ships of reasonable suspicion of having been the importers of this dreaded malady.”

THERAPEUTICS AND MATERIA MEDICA.

This branch of medical science has been indebted to no writer of the present day more than to Dr. PARIS; and we cannot begin what we have to say on the subject more appropriately than by laying before our readers some of the general views respecting the operations of medicinal substances, which are contained in the last edition of his “Pharmacologia.” These, indeed, were published anterior to the period embraced in our present Essay, but unfortunately not early enough for us to introduce them in our preceding “Historical Sketch.” Dr. Paris is of opinion that the immediate effect of a remedy may depend upon mechanical, chemical, or vital agency; and further, that such curative impressions may be either *absolute* or *relative*, *primary* or *secondary*, *local* or *general*, *direct* or *sympathetic*, *permanent* or *transient*. His opinions are illustrated in the following manner:—Certain medicines, called purgatives, excite alvine evacuations under every condition of the body, and may therefore be called *absolute* agents: diuretics, on the other hand, generally require for their operation a certain favourable state of the system, and are denominated *relative*. The difference between the *primary* and *secondary* operation of medicines is well explained by referring to the class of diuretics: of these, some act primarily, stimulating the secreting vessels of the kidneys by actual contact, such as potass, nitre, turpentine, &c.; while the direct agency of others, as digitalis, is upon the absorbents, the diuresis being a secondary effect. This class of medicines illustrates well the circumstances attending the *local* and *general* action of remedies,—how they may excite distant organs by en-

tering into the circulation, and being thus brought into contact with them; or they may excite a local effect upon the stomach and bowels, "thus arousing their energies through the mysterious medium of sympathetic communication." While many medicinal substances undergo digestion, yet, according to the experiments of Dr. Paris, there are others which pass through the stomach unchanged, and entering the general system either by the vena portarum or thoracic duct, are subsequently brought into direct communication with particular organs. This is said to hold good more especially with regard to many alkaline salts, which, having passed through the kidneys, exciting them to increased action, may afterwards be detected in the urine by chemical tests. Various essential oils, bitter principles, and colouring matters, are capable of resisting digestion, and circulating unchanged to remote parts. In other instances it would appear that compound bodies are sometimes decomposed, one ingredient being digested, and the other passing unchanged: such, for example, is the potassæ acetæ, the vinegar of which is acted upon by the stomach, while the alkali enters the circulation. There is still another change which the digestive organs are capable of exerting on medicinal substances,—viz. their entire decomposition, by which they may be rendered wholly inert. Dr. Paris imagines that this may be the reason why substances exciting great energy upon some animals, are comparatively inert when exhibited to others. Those habituated to vegetable food are less affected by vegetable poisons than carnivorous animals, so that a dog is destroyed by half the quantity of opium which a rabbit might take with impunity.

The action of remedies by sympathy, through the medium of the stomach, is too obvious to require illustration: that the stomach, however, is not the only organ capable of propagating sympathetic impressions, is demonstrated by the dilatation of the pupil produced by the application of belladonna, &c. to its vicinity. Dr. Paris alludes to another kind of sympathy, called by Mr. Hunter the *contiguous*;—it de-

pend upon the continuity of parts ; and an illustration is afforded by the relief given to internal inflammation by external fomentations or blistering.

The views of this accomplished physician with regard to the *modus operandi* of medicines are briefly as follow :

“ The particular organs of the body may be excited into action through four distinct and different modes of communication.

“ I. By the actual contact of the appropriate remedy. 1st. Conveyed by absorption, without decomposition ; internally, *a*, through the branches of the thoracic duct, *b*, of the vena portarum ; externally, *c*, through the branches of divided blood-vessels, *d*, through the branches of lymphatics. 2d. Conveyed by absorption with decomposition, by which one or more of its constituents are developed, and pass into the circulating current.

“ II. By an impulse conveyed by the instrumentality of the nerves.

“ III. By the sympathetic control excited by the stomach on distant parts.

“ IV. By the operation of continuous sympathy, or of that which is excited by the mere proximity and continuity of parts.”

Dr. Paris goes on to remark, that these are frequently antagonist operations, and that remedies are not to be regarded as similar agents, although they produce the same apparent effects, unless they act through the same medium. Indeed, he thinks it probable that no two remedies are exactly alike, and that “ those medicines only are practically similar whose operations have been found, by experience, to continue similar under every condition of the human body ; and which, moreover, owe such similarity to modes of operation which are compatible with each other, and consonant with the general indications of cure.” The similarity of effect resulting from entirely different modes of operation, is well illustrated in the case of diarrhœa : this may frequently be checked by narcotics, astringents, or absorbents.

An opiate, for instance, diminishes the increased discharge, by removing the irritation on which it depends; catechu might produce the same result, by restraining the flow of acrid fluids into the intestines; while chalk might act as efficaciously as either, by neutralising the acids, on the presence of which diarrhœa so frequently depends.

The observations of Dr. Paris on the *modus operandi* of the different classes of remedies are extremely interesting: our limits, however, oblige us to select but a few of these.—On the subject of vomiting, he is disposed to adopt the views of Dr. R. HARRISON. “It appears to me, (says this writer,*) that vomiting may be explained in the following manner:—the irritation of the stomach makes a call upon the brain for the aid of the diaphragm and the abdominal muscles, in order to expel its contents; the diaphragm then becomes contracted and fixed, the ribs drawn down, and the abdominal muscles drawn inwards, so that the stomach is pressed on all sides by voluntary muscles, which, together with its own contraction, expel the contents.” From this it appears that, where the brain is much oppressed, it cannot transmit the requisite influence to the muscles; and so, disregarding the call from the stomach, vomiting is not excited. Under these circumstances, it frequently happens that the most powerful emetics fail in stimulating the stomach to evacuate its contents; an instructive instance of which was related by Mr. YEATMAN, of Frome, in a recent Number of this Journal:†—in his patient two scruples of sulphate of zinc, ten grains of sulphate of copper, in two doses, and twenty-four grains of tartrate of antimony, also in two doses, were exhibited, without producing emesis.

“Under such circumstances, venesection may in some cases prove a powerful adjuvant, by unloading the vessels of the brain, and thus restoring to the nervous system its necessary excitability. Where its powers have been paralysed by the operation of a narcotic, a copious draught of some

* London Med. and Phys. Journal, July 1819.

† February, 1823.

vegetable acid, or the effusion of cold water upon the surface of the body, may impart efficiency to an emetic. The operation of nightshade, and some other narcotic poisons, may be adduced in further illustration of this subject. An excessive dose of the *Atropa belladonna* produces symptoms of alarming stupor, and so difficult is it to evacuate the stomach under such circumstances, that as much as fourteen grains of tartarized antimony have been administered without effect: now if in such a case a copious draught of some vegetable acid be given, the emetic will be more likely to succeed. Here, then, we perceive that the brain, being paralysed by a narcotic poison, is unable to lend its aid to the muscles requisite for the operation of vomiting, until its energies are restored by the anti-narcotic powers of a vegetable acid. The practical precaution which this view of the subject affords is extremely important,—*not to allow the apparently inactive state of the stomach to induce us, inconsiderately, to augment the dose of an emetic:* for, although the stomach, for the reasons just stated, may be unable to void its contents by vomiting, it may nevertheless retain its sensibility, and be therefore liable to inflammation. Dr. Harrison has reported a case of this kind, where the practitioner, in attempting to excite emesis in an epileptic patient by a very large dose of sulphate of zinc, produced an inflammation in this viscus that terminated fatally.”

As the activity of absorption is generally “in an inverse ratio to that of the circulation,” it becomes of importance, in cases of poisoning, to shorten the period of nausea as much as possible, in order to prevent the absorption so likely to take place during this interval, before full vomiting is induced.

Diuretics produce their effects by very different modes of action, and there is no class of medicines more precarious in their operation. With the view of bringing together the principal facts upon this subject, Dr. Paris suggests their arrangement under three distinct classes:—1. Medicines which acts *primarily* on the urinary organs; 2, medi-

cines which act primarily on the absorbents, and *secondarily* on the kidneys ; 3, medicines which act primarily on the stomach and *prima viæ*, and secondarily on the absorbents. Under the first of these classes are arranged the different saline preparations, as potass, soda, and nitre, which are carried to the kidneys through the medium of the circulation, and may be detected in the urine. " Let any person (says Dr. Paris) take several doses of nitre, taking care that the bowels are not disturbed by the medicine, and he will find, by dipping some paper into his urine, and afterwards drying it, that it will deflagrate, and indicate the presence of nitre." The substances enumerated undergo no change ; but other salts are decomposed *in transitu*,—such are the acetate, citrate, and supertartrate of potass and soda. The vegetable diuretics have a similar mode of operation, as most of them contain a bitter principle, which is supposed to be separated by the digestive powers of the stomach.

" It particularly merits attention, that the diuretic operation of any body that acts by being absorbed is at once suspended if catharsis follows its administration, whether in consequence of the largeness of its dose, its increased solubility, or from the effect of its combination with some purgative ; for it is a law, *that the process of assimilation, and absorption from the duodenum, are arrested, or very imperfectly performed during any alvine excitement.* The different effects of the saline compounds of the alkalies with tartaric acid, elucidate the truth of this law in a very striking manner : thus, supertartrate of potass, or cream of tartar, in well-regulated doses, acts, as we all know, upon the kidneys : the tartaric acid being, as I suppose in this case, abstracted and assimilated by the digestive process, and at the same time the alkaline base (potass) eliminated, and subsequently carried into the circulation ; but if we increase the solubility of the compound, by reducing it to the state of a neutral tartrate (soluble tartar), or by combining it with boracic acid, or some body that has a similar effect ; or, what is

equivalent to it, if we so increase the dose of the cream of tartar that full catharsis follows its administration, then diuresis will not ensue, since no decomposition can take place under such circumstances; nor can it be carried by absorption into the circulation. Nitre, and those salts which are carried to the kidneys without previous decomposition *in transitu*, are subject to the same law; for, if we combine them with purgatives, their presence can no longer be recognised in the urine, as I have ascertained by experiment. Oil of turpentine, in doses of two fluid-drachms, may so excite the urinary organs as to produce even bloody urine; whereas a fluid-ounce will scarcely occasion any apparent influence upon those functions, because the increased dose acts upon the bowels, and consequently prevents its passage into the circulation.

“ Sulphate of magnesia does not readily produce any diuresis, because it operates upon the bowels; but the experiments of Vitet and Bracy Clarke have shown that, if this saline compound be administered to the horse, whose bowels are not easily affected by purgatives, it acts powerfully upon the kidneys: and I will take occasion in this place to observe, that, on account of this inirritability of the bowels of the horse, diuretic medicines are more certain in their operation than in the human subject; a fact which, in itself, shows the importance of attending to the state of the bowels, during a course of these diuretics, which require to be absorbed before they can produce their specific effects.

“ Equally necessary is it to attend to the state of the vessels of the skin; for if, during the administration of a diuretic, these vessels be excited by external warmth, its action may be diverted from the urinary organs to the exhalants on the surface, and occasion diaphoresis; but, if the surface of the body be kept cool, this diversion will not occur. So greatly, indeed, does this cooling the surface determine to the kidneys, that the usual diaphoretic medicines may, by an attention to this circumstance, be converted into powerful diuretics.”

Mercury, in its various forms, is the only body ranked under the second class.

With respect to the third class, it is observed that a diuresis is frequently caused by substances acting on the stomach, which again sympathetically affects the other parts, especially in absorbents. Now this form of diuresis may be supposed to arise in various ways: the remedy may operate, *first*, "by diminishing the arterial action, and increasing that of absorption." It has been demonstrated (by Majendie) that the absorption of a poison is facilitated by depletion; and Dr. Blackall has proved the possibility of applying this truth to the cure of dropsy. It would appear, then, that means which control the circulation are capable of increasing the activity of absorption: "in this manner, the *digitalis purpurea* acts as a sorbifacient; and it may be remarked, that it seldom, or never, produces its diuretic effects without a concomitant reduction of the frequency of the pulse: its power appears, too, only when it is administered in dropsy; in a state of health it will reduce the pulse, but not increase the discharge of urine." Again, remedies may act "by increasing the tone of the body in general, and that of the absorbent system in particular." Where dropsy is the consequence of debility, as after fevers, &c. any tonic, or even nourishing diet, may have a diuretic effect. The third manner in which this class of diuretics are supposed to act, is "by producing catharsis, and thereby increasing the action of the exhalants *directly*, and that of the absorbents *indirectly*." Hydragogue purgatives are of this kind: they excite a copious watery discharge from the bowels, and the absorbents are thus stimulated to supply the serous part of the blood, diminished in its due proportion. Such is the effect of elaterium. "In the whole circle of medicinal operations (observes Dr. Paris) there is nothing more wonderful than this, that an impression made on the internal surface of the *primæ viæ* by a few particles of matter should thus convey, by magic as it were, an impulse to the most remote extremities, rousing their absorbents to action."

The remarks of Dr. Paris on the other classes of medicines are of much interest, but our limits oblige us to content ourselves with having selected those which appeared to us of the most importance; besides which, some of the other interesting novelties, contained in the fifth edition of his work, have been pointed out in former numbers of this Journal.*

Various communications are to be found in recent numbers of this Journal, tending to prove the efficacy of *iodine* in *bronchocele*, and some other glandular enlargements; and we deem the subject of sufficient importance to justify our laying before our readers some of the most recent information relative to this powerful medicine, from the authority of BRERA† and BARON‡ In doing this we shall quote freely from our respectable contemporary, the Medico-Chirurgical Review. COINDET§ imagined that the ill effects sometimes resulting from the internal exhibition of iodine might be obviated by its external application: this idea Brera regards as unfounded, and he believes, further, that its internal administration is equally safe, and more efficacious, than the other, except under particular circumstances. He uses the following formulæ:

“1. *Tincture of Iodine.* Made by dissolving 48 grs. of pure iodine in an ounce of alcohol (at 35). This is the preparation most frequently used at first by Dr. Coindet, who, as well as Brera, recommends its being used *fresh*, as it is liable to decomposition in a few days. The dose is from five to twenty drops for adults, three times a-day. Twenty drops contain about one grain of iodine.

“2. *Pills of Iodine.* Made by forming one grain of iodine

* January and February.

† Saggio Clinico sull'Iodio, e sulle differenti sue Combinazioni e Preparazioni, &c. Padua, 1822.

‡ Illustrations of the Enquiry respecting Tuberculous Diseases. By JOHN BARON, M. D. 1822.

§ Observations on the remarkable Effects of Iodine in Bronchocele and Scrofula, &c. &c. Translated by J. R. JOHNSON, M. D. 1822.

into two pills, with elder-rob and liquorice powder; one to be taken morning and evening.

“ 3. *Iodine Ointment*. Made by rubbing up a drachm of pure iodine with an ounce of lard, or half a drachm of hydriodate of potass with an ounce and a half of lard; the former in the quantity of a scruple, the latter about the size of a filbert, rubbed on the part.

“ 4. *Solution of Hydriodate of Potass*. This preparation is stated to be preferable to any of the foregoing, producing their good effects without their inconveniences. It is formed by dissolving 36 grains of the hydriodate in an ounce of distilled water, and is given in the same dose as the tincture.

“ 5. *Solution of the Ioduretted Hydriodate of Potass*. Formed by dissolving 36 grains of the hydriodate and ten grains of pure iodine in ten drachms of water. This is said to be a still more efficacious preparation than the preceding, and requires to be given in small doses,—viz. five or six drops, three times a day, to begin with.”

Its effects upon the human frame are thus described :

“ When iodine is cautiously and gradually introduced into the system, it affects it in a general manner, analogous to that of mercury, but very different in the consequences. The first, and what may be called the *salutary* effects of iodine, are an increase of appetite and of the strength of the pulse: whenever these are produced, we must watch with the greatest care that these salutary limits are not exceeded, and the pernicious consequences of an over-saturation of the system induced. The complete impregnation of the system is indicated by the change of the above-mentioned increased action of the pulse into decided frequency and quickness,—by a sense of heat and irritation of the fauces,—pain of the orbits or eye-balls, with obscured vision,—pain of the internal ears and gums, with occasional salivation,—head-ache, restlessness, loss of sleep, with swelling and pain of the diseased organs, (*e. g.* thyroid and other glands,)—and an increase of appetite, sometimes to a degree of voracity. In

some persons the submaxillary glands become painful and swollen ; and a similar state of the mammæ, *with eventual diminution of their natural volume*, takes place in some females. When given from the first in an over-dose, iodine produces a strong burning sensation in the fauces, which frequently extends down the œsophagus to the stomach and whole intestinal canal. In a still higher degree of saturation (or *iodization*, as the author calls it,) of the system, to the above-mentioned symptoms succeed very considerable emaciation, even in the space of a few days,—excruciating pains in the orbits and eyes, with great defect of vision,—and similar pains in the diseased parts ; the strength vanishes ; neuralgic pains are experienced in the stomach, chest, bowels, &c. ; the sleep entirely fails ; and there is obstinate palpitation of the heart, with tremors, convulsions, or palsy of the extremities. To the excessive appetite succeeds complete anorexia ; and the factitious disease finally terminates life, in a short time, by universal inflammation of the nervous and vascular systems, (*profonde angioitidi e neuritidi.*)

“ Upon the appearance of the milder class of symptoms above mentioned, the immediate suspension of the medicine (which ought always to be done,) sometimes is found sufficient to put a stop to them in a few days. For allaying these deleterious effects, rigorous regimen, copious mucilaginous drinks, and the tepid bath, are recommended ; and where the topical affection of the goitre, or other tumors, runs high, fomentations, poultices, leeches, &c. are prescribed ; and general bleeding is advised where there exists a high phlogistic state of the whole system.

“ As these symptoms sometimes show themselves all at once, we ought to be cautious in not too hastily increasing the dose in cases wherein no obvious effects are produced. After the bad symptoms are allayed, the medicine is to be repeated with the same precautions as in the case of mercury and arsenic.”

According to Brera, it gives rise to particular action, not

only in the thyroid gland, but in the uterus,—increasing scanty, and checking profuse menstruation; sometimes likewise diminishing the size of the mammæ: and hence he is led to hope it may prove useful in organic diseases of the uterine system.

Dr. Baron is of opinion that we have no medicine possessed of powers equal to those of iodine, in the removal of morbid growths by promoting their absorption. His attention was first drawn to the subject by the report of Dr. Coindet, and he has since tried it in a variety of cases different from those mentioned by that gentleman.

“The first I shall mention is one of *physconia hydatidosa*. It much resembled a case which I have described at page 95 of my Enquiry. The abdomen was as large as that of a woman in the last stage of pregnancy. The tumor had been more than once reduced in size, by the long continual use of mercury and liquor potassæ; but it never was effectually removed. More than once its bulk was very much diminished, by an event which establishes its original character, and justifies the name which I have assigned to it; I mean the disruption of one or more of its cysts, and the discharge of the contents into the alimentary canal: such fluids as hydatids are known to contain in various stages of their progress, having, after the events just described, been discharged both from the stomach and per anum.

“This patient began the use of the hydriodate of potass in solution, on the 6th of October, 1821. She took at first eight drops twice a day, and continued them very regularly till the 23d of March, 1822. By this time a marked effect had been produced on the size of the tumor; but, in consequence of some unpleasant feelings about the stomach and head, the drops were discontinued, and not resumed till June the 22d.

“From the use of this medicine, a very striking absorption of the diseased structure has taken place. Before she began it, the bulk was nearly as great as at any former period: now, it is not discernible by the eye; and it requires

a pretty accurate examination by the touch to discover the remains of the substance, as she calls it, in the left iliac region."

The hydriodate of potass is the form to which Dr. Baron appears to give the preference; from which he informs us that he has scarcely found any of those inconveniences mentioned by Dr. Coindet: his experience likewise agrees with that of Professor Brera, "that mere friction or inunction will not, in many cases, be successful without also giving it internally."

Narcotics, in the form of vapour or fumigation, have lately been recommended by HUFELAND in the cure of *epilepsy*. The hyoscyamus and belladonna were selected, and opium occasionally added to increase their effect; the method of their exhibition being as follows:—Six ounces of the former, and ten or twenty grains of the latter, were moistened with water, and spread on an iron spatula, to which heat was applied by a spirit-lamp, until carbonization of these substances took place, and a vapour-bath filled with the fumes. The patient was submitted to the action of the atmosphere thus charged for a quarter of an hour, or rather longer; the result of which was some increased perspiration, and a tendency to congestion about the head: sometimes the more unpleasant symptoms of vertigo, tremors, or spasms occurred, requiring the active superintendence of the physician, and variations in the quantity of the narcotics corresponding to the circumstances.*

SURGERY.

Whilst the physician and physiologist have to lament the occasional failure of their best endeavours for the advancement of their respective branches of science, and cannot but admit that they too frequently have been walking in a circle, the surgeon's progress, if not rapid, is at least constant, and

* *Nouveau Journal de Medecine*, October 1822.

every step he takes leads him nearer to perfection,—that is, to the perfection of his *art*. The last six months, if it be not distinguished by any very brilliant works on surgical subjects, has been fertile in recorded operations of great importance,—in some few novelties,—and in many highly interesting observations, tending to establish and confirm particular points of practice, hitherto subject to doubt and uncertainty. We shall first detail what has been done towards the advancement of the operative part of our art; we shall then endeavour to appreciate what we owe to those authors who have published on this branch of science during the last half year; make some incidental remarks upon the present state of practice in some of those diseases usually denominated surgical; and enumerate (for we can do little more without the assistance of engravings,) one or two new instruments that have been presented to the profession during the period under consideration.

In the first rank of important operations we have to record the *ligature of the arteria innominata* by GRAEFE, and also by Dr. MOTT, of New-York; and of the *subclavian artery* in no less than three instances, two in this country and one in St. Petersburg. All these cases, excepting the last, of which we only know the fact that the patient did recover, but are not in possession of the details, proved fatal; but in the first operation, that of the ligature of the *arteria innominata*, the patient survived sixty-eight days, and died of diseased lungs. The subject of this operation was a sailor, about thirty years of age, who was affected with an aneurism of the right subclavian artery. During the operation, the patient was put upon his back on a table, in such a manner that his head was hanging down on one side of the table, and the *arteria innominata* drawn up a little above the manubrium of the sternum. The professor then made a longitudinal incision, near the anterior edge of the sterno-mastoid muscle, down to the sternum, exposed the carotid artery, and followed its course till where it unites with the subclavian artery to form the trunk of the *arteria innominata*.

This was effected with very little difficulty, and the *arteria innominata* became distinctly exposed to sight. By means of a needle, curved in a particular manner for that purpose, a ligature was then passed round the *arteria innominata*, and both ends of it tied together. No alarming symptom ensued, and the ligature, which was considerably broad, came away about a fortnight after the operation, carrying out just that portion of the artery where the *innominata* is divided into the carotid and subclavian artery. Some time afterwards, however, a hemorrhage suddenly arose, which, though considerable, was soon stopped by the application of cold water and pressure. The patient then complained of pains in the tumor formed by the aneurism, in which fluctuation was distinctly to be felt; and this determined Dr. Gräffe to make an incision into the aneurismal sac. A considerable quantity of pus and grumous blood was thus evacuated; and matter continued to be discharged daily from this opening, whilst the other was filled with granulations, and went on exceedingly well. The patient, however, got into a state of fever, began to spit blood, and to throw up matter; and so he died on the sixty-eighth day after the operation had been performed. On dissection, the lungs were found in a diseased state; and in the *arteria innominata* a clot had been formed, extending from its origin to where the ligature had been applied. By an injection made into the aorta, the arteries of the right arm and side of the head were entirely filled; the circulation in these parts having been fully re-established by anastomosing branches.

We have described the operation performed by Mr. BRODIE in a former Number of this Journal: in this case the aneurism, situated in the axilla, was small, had not existed any great length of time, and the patient was about sixty years of age. The result was fatal on the sixth day. In Mr. TRAVERS's case, the patient was about the same period of life; but the tumour was large, insomuch that the parts were greatly thrown out of their natural situation, rendering the operation difficult and tedious: it occupied nearly two hours.

The result was unfortunate, the man dying on the third day.

Dr. MOTT's case of ligature of the arteria innominata is related in a German periodical work,* and the leading facts are these: The patient was a sailor, fifty-seven years of age; the length of time that the aneurism had existed does not appear, neither is its extent or situation very accurately described; the man was affected with a violent cough, and is said to have been very feeble. On the 11th of May the operation was performed, in the following manner:

"Two incisions were made, one in the direction of the clavicle, and the other along the sterno-cleido-mastoideus. The carotid was laid bare, and traced towards the subclavian, which was found so diseased that they had no alternative but to tie the innominata. They accordingly carried the incisions deeper, and, separating the recurrent and the phrenic nerves, they came to the division, and passed the ligature, with a curved needle, about half an inch higher. The parts were then brought together by suture, and the wound bandaged. There were only three arteries divided,—a branch of the internal mammary, and two branches severally from the inferior and superior thyroid. He lost only about three ounces of blood. The whole operation lasted about an hour.

"The patient immediately after felt quite well; pulse 69; temperature of the arm nearly the same as the other; respiration unchanged. From this period to the twenty-second day after the operation, he continued to improve; the suppuration went on well, the ligatures came away without accident, and the pulse, which had at one time risen to 120, was reduced by venesection to its natural standard; the cough was disappearing, cicatrization was going on properly, and the swelling becoming gradually less. He was in high spirits, and was so far recovered that he walked daily in the garden of the Hospital. All on a sudden, however,

* LANGEENBECK'S Neue Bibliothek.

on the twenty-fourth day, a hemorrhage from the wound took place; and though it was soon got under, and there was little loss of blood, it recurred twice in the next two days, respiration became painful, and the patient died on the twenty-sixth day.

“Eighteen hours after death, the wound was black and fœtid. There was no trace of inflammation in the arch of the aorta, the origin of the arteria innominata, or in the lungs. The internal membrane of the innominata was smooth and soft, and its parietes were so thick that there was only room for a crow-quill to pass. The subclavian artery opened into the tumour; the carotid was filled with coagulated blood. The arteries of the arm were healthy. The clavicle was carious, and almost separated in the middle. The death was evidently caused by extensive suppuration.”

Instances of the successful result of the *ligature of the external carotid and iliac arteries*, are now so multiplied as to have lost much of their interest. Two cases of this kind are related by Dr. ARVEND, of St. Petersburg.* Both patients were about forty-four years of age, and the ligatures came away on the sixteenth and seventeenth days respectively.

In England, surgeons appear to be generally decided as to the propriety of suffering the ligature to fall off spontaneously in the operation for aneurism, and we are happy to find this, which we consider sound, practice has found an advocate in Professor VACCA, whose experiments and arguments appear to us to be conclusive on this subject.† Two cases where SCARPA's plan was successfully employed are, however, detailed since our last Retrospect. They were operations for the cure of popliteal aneurism: in both, the patients were in the prime of life, and the ligatures were removed on the fourth day. We have so recently stated our objections to this method of performing the operation, that we do not consider it necessary to renew the discus-

* Salzburger Zeitung Med. und Chir.

† London Medical and Physical Journal, May.

sion now: we must not, however, omit noticing in this place a late addition of M. Scarpa to his usual apparatus,* for it seems that he still adheres to his plan of removing the ligature at the end of the third day; and all his contrivances have one object in view, that of rendering this second operation (for such in fact it is) as little painful as possible to the patient. This new plan consists in passing a hollow instrument down to the knot of the ligature of the vessel, by means of that portion of it which is left out of the wound. This sound has a groove throughout its whole extent, and in which a very small knife is to be passed down to the knot, which is in this way to be cut, or rather *sawn*† asunder: the blade of this knife is to be only five lines in length, and sufficiently fine to pass readily into the groove of the sound. This is the outline of M. Scarpa's proposition. English surgeons, we believe, are not likely to be induced to resort to all these unnecessary and complicated means to do that which we conceive it to be much wiser and safer to leave undone.

We shall subjoin one passage from M. Scarpa's letter, in order to show that, even with the additional facility afforded by this new contrivance, some little manœuvring is necessary, and a good deal of irritation must be produced by taking away the ligature, even after the knot is divided. "The hand of the operator (he says) feels the division of the ligature: nevertheless, on the third day after the operation, as all foreign bodies remaining in the wound are glued together by the elastic substance which is thrown out, and as it is likewise important to be assured that the ligature is completely divided, before the sound is withdrawn from the bottom of the wound, in order to prevent the artery from being pulled or shaken, it is essential to extract from the wound immediately the inner cylinder, by means of the waxed

*-Revue Medicale, Mai 1823.

† "Un petit mouvement de scie," is recommended to be given to the instrument.

thread attached to it. The sound is afterwards drawn out with care, and with it the ligature comes away without difficulty."*

Two cases of *Cæsarean section* are recorded in this Journal; one of which was successful. We have certainly nothing to encourage us to perform this operation in our own country; but it would appear that climate, mode of living and diet, or some other unexplained causes, do subtract considerably from the peril of this most formidable operation; or, at least, that we meet with a greater number of recorded instances of its successful result among foreigners in one year, than we can boast of possessing from the earliest records to the present time. We confess that we have strong objections,—we had almost said prejudices,—against the performance of this operation, but which certainly do not apply to that which follows.

M. BORRONE has related an operation of the same kind, performed upon a female aged thirty-six, who died of dysentery, at the full period of gestation. He extracted from the body, twelve minutes after death, a small emaciated female child. It was some time before the infant uttered the least cry, but it felt warm, breathed, and the pulsations of the heart were manifest. Thirty-two minutes after extraction, it began to suck. It gradually acquired strength, and, towards the middle of the year 1822, was tolerably robust.†

An interesting case of *bronchotomy* has been published by Mr. JAMESON, of Baltimore. The subject, a boy aged between four and five years, was visited by that gentleman, in consequence of a water-melon seed having descended into his windpipe about seven days previously.

"The child was in a high fever, with incessant croupy cough. I requested the advantage of the opinions of Drs. Jennings and Cromwell.

* Lettre de M. SCARPA, Mars 1823.

† Medical Repository, January.

"The child was bled, took several emetics, which had the effect of affording the most decided benefit. The vomitings, by bringing up great quantities of phlegm, relieved his cough and respiration so much, as to encourage his parents to hope that this plan would ultimately succeed in relieving him altogether. For three or four days he would be free from almost any appearance of disease; then he would be threatened with strangulation, and severe and incessant cough would be excited, and continue till he was quite exhausted. Thus he continued, upwards of three weeks after I first saw him, to change from a state of extreme danger to one of apparent health, except his gradual loss of strength and flesh. After this period the vomits began to lose their beneficial effects, and, ultimately, evidently did him harm. The parents having resisted our advice respecting an operation, I gave them expressly to understand that unless they consented to it, I would no longer be responsible; nor would I be willing to perform an operation when no hope was left of saving him by it. I requested a final consultation with the gentlemen above named.

"On the 31st of August we met, and agreed that, as there was no chance of relieving him without an operation, if the symptoms should not again remit and leave us a reasonable hope, which his situation on that day did not, that then the operation should either be promptly performed, or all idea of it abandoned for ever.

"On the 2d day of September, one month after my first visit, and five weeks after the accident, I engaged in the operation, in the presence of Drs. Cromwell, Jennings, Wright, Dickson, and others. I made an incision about two inches in length, parallel with and in front of the trachea, terminating below near the sternum, and above about the middle of the thyroid cartilage. The integuments were much thicker than I expected: that part of the wound over the *rings* to be divided was more than half an inch. Having completed my incision, I passed the point of the scalpel between the thyroid and cricoid cartilages, and cut down-

wards so as to form a wound through the rings of the trachea, of about three-fourths of an inch. Here it may be proper to notice some change of my views growing out of the circumstances present. I had provided myself with delicate forceps, formed out of silver wire, hoping, if I could not take hold with the forceps, that, by turning the seed across the tube, I should enable the organs of respiration to throw it out of the wound or through the glottis; and I was not entirely at ease about a risk which I imagined there was of the seed being forcibly lodged in the glottis, and giving us some trouble.

“ The vessels divided by the knife bled so freely as to induce me to hope that I could derive advantage from this occurrence. I determined to open the wound for a short period, so as to admit blood into the trachea, with a view of forming coagula about the seed, or to stop up the trachea as much as possible, with a view of obtaining a more complete expelling power from the respiratory organs. Finding that my forceps were, though small, still too large for a space so confined as that deep between the sternum and the chin of a child, I resolved to trust to moving the seed, and irritating the lungs with a common probe, believing the coagula would materially facilitate my design. I was not aware that my probe had been taken out of my case, and there being none at hand, I passed down the forceps with their chops pressed together. The moment I touched the seed, and, no doubt, turned its flat side across the tube, which was somewhat choked with coagulated blood, it was thrown through the glottis as out of a pop gun, in consequence of the irritation excited by touching the inner surface of the trachea at its bifurcation.

“ It was instantly perceived that the child was relieved of much of his sufferings; and so sensible was he of what had been done for his relief, that he lay perfectly quiet, and bore the introduction of three sutures without a struggle or complaint. A slight symptomatic fever followed the operation; but there was very little cough, and that was free

from the peculiar croupy sound during the presence of the seed. The fever yielded to two or three mild cathartics. At this time (19th September,) the child is in fine health, but a slight sore remains at the wound, in consequence of the sutures having given way before the skin had united; but the trachea closed up perfectly after the first afternoon, at which time a little air passed through the wound."*

Mr. WISHART has favoured us with an account of a case of *fungous hæmatodes of the eye-ball*, and which was successfully extirpated. The subject of this operation was a boy nine years of age. "On examination, the eye was observed to have a general turbid appearance; it was devoid of lustre; and, on minute inspection, the cornea was found to be transparent, but numerous vessels passing over the sclerotica into it. The pupil had a slightly serrated appearance; was moderately dilated, but did not change its size on variations being made in the degree of light. In the posterior chamber an opacity was observed, resembling a yellow dusky membrane, lining the whole posterior part of the eye-ball, more distinctly perceived when the eye was viewed laterally. The vision was nearly gone; the eye watered profusely, especially when exposed to the light, which occasioned considerable pain and irritation: had at times a shooting pain in the frontal edge of the orbit, of short duration; pulse natural; general health good.

"About two months ago, received a blow on the eye while at school. The afternoon of that day it gave him no uneasiness, but next morning he felt great pain in the eye, and the vision was almost entirely lost. The effects of this injury were apparently removed by free local bleeding and antiphlogistic treatment, under the care of Mr. Stewart, of Queensferry; and in a few weeks he was able to return to school. About ten days ago, the eye again became inflamed and painful. Six leeches were ordered to be applied to

* American Medical Recorder, No. 21.

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* American Medical Recorder, No. 21.

the forehead, and a dose of infusion of senna to be given in the morning."

It is needless to detail the treatment employed during the space between the 18th of May and the date of the operation, since it had no influence over the disease. On the 3d of July, the constitution began to sympathise with the local malady : febrile symptoms supervened, with great pain in the eye and frontal margin of the orbit.

"In consultation with Mr. Gillespie, it was agreed that the removal of the eye-ball was now expedient ; but, with the view of lowering his system, two cupfuls of blood were directed to be taken from his arm on the 4th. On the 5th, he had a dose of salts ; on the 6th, six or eight leeches were applied to the forehead and temples ; and on the 8th, the salts were to be repeated in a full dose.

"9th July.—The inflammatory symptoms having greatly subsided, and the disease in the internal part of the eye being still on the increase, the iris being now in close contact with the cornea, and the pupil completely closed by the opaque matter, it was resolved to extirpate the eye-ball ; and the operation was performed in the following manner :

"The temporal angle of the eyelids was divided with a scalpel, which was then passed round, first at the frontal aspect of the eye-ball, from the external to the internal angle, and the muscular and other attachments divided ; the lower segment was divided in a similar manner ; and the fore-finger of the left hand being passed from the nasal angle backwards, the optic nerve was found to form the only remaining connexion ; it was readily divided with the same scapel, and the whole removed from the orbit. The lacrymal gland was dissected out ; the vessels were allowed to bleed for a few minutes. The divided eyelid was then brought together by a single small ligature ; and, the clotted blood being removed, two small strips of dry caddis were pushed gently into the orbit between the eyelids. Over this a pledget of simple ointment, secured by a compress of caddis, and a few turns of a double-headed roller passed

round the head. The little patient was put to bed. He bore the operation uncommonly well: it occupied only four minutes.

"After being in bed for about an hour, a slight dropping of blood was observed; but, as he had fallen asleep, it was not thought necessary to remove the dressings, and it did not increase.

"11th.—Slept well both last night and the preceding; complains merely of the stiffness of the dressings. Pulse natural: a great part of the dressings removed; low diet.

"13th.—Complained of slight pain of the orbit this morning, of very short duration: dressings entirely removed; suppuration begun; parts look well; became very faint during the dressing, apparently from fear and change of posture, it being necessary to take him out of bed for the convenience of a proper light.

"15th.—Dressings changed daily; discharge very moderate; not the smallest derangement of functions, and no complaint, except of hunger.

"17th.—Has been out of bed all day, and walking about the drawing-room; discharge healthy; allowed more nourishing diet.

"21st.—I found the patient so well that I did not find it necessary to visit him again; and I heard no more of him till the beginning of March of the present year, when he called to shew me a small tumour which had been observed in the orbit. On examination, I was happy to find that it was merely a granulation projecting a little, with a narrow neck; on lifting it up with the point of a probe, it bled a little; and the little fellow, being evidently much alarmed, dropped off the chair in a state of syncope. I was unwilling, on this account, to do any thing more, but requested him to return in a day or two, intending to cut off the projection with the curved scissors, or put a thread round it, as might appear most advisable. However, on the following day his father wrote to me, that 'the bit of flesh had been so disengaged by you yesterday, that it came out when his mother was washing

the eye. The place is a little red, but he complains of no uneasiness.'

"Being anxious to ascertain whether this cure continued permanent, I wrote to Mr. L. in July, and received the following very satisfactory answer: 'I am happy to say that, since you last saw my son, the eye has appeared to be quite healthy and well. He has not, upon any occasion, complained of the slightest uneasiness in it, or of any affection of the head: and his general health has been perfectly good. It is consoling to think that the consequences of the operation have hitherto been, and I now sincerely hope will continue to be, so favourable and satisfactory to all concerned.'"

On the dissection of the eye-ball, the appearances presented were precisely the same as those so accurately delineated by Mr. Wardrop. The origin of the disease in the retina was finely and satisfactorily illustrated. The optic nerve was quite healthy; the sclerotic and choroid coats were of natural texture; the cornea was a little softer than natural, and not perfectly transparent; the lens was pushed into contact with it, and seemed smaller than usual, and flattened. The diseased mass into which the retina had been converted, connected only to the optic nerve, floated loosely in various folds, occupying both chambers of the eye. The eye-ball did not appear to be at all enlarged.

This case we consider as valuable on several accounts; it is nearly, if not quite, solitary as an instance of success in this deplorable malady; the length of time that has elapsed since the child's recovery (a year and a half) affords reasonable ground for hoping that the cure will be permanent; and it teaches us the propriety, or rather the necessity, of operating at an early period of the complaint, and the importance of doing so previous to the disease having attacked the optic nerve.

Dr. DRAPES has published a case of *sarcocoele*, in which the testicle was removed; and we are induced to mention it, because, from the peculiar circumstances of the operation,

the spermatic artery was not taken up separately, but the whole cord was included in the ligature. This practice has been represented by many writers of eminence as fraught with danger, while others of equal celebrity recommend it as the preferable method. It is of importance to come to some decision upon this practical point, as the ligature of the whole cord, if it be equally safe, certainly simplifies and shortens the operation very materially. Mr. PEARSON,* in speaking upon this subject, recommends the ligature of the whole cord, and observes that the knot should be drawn *very tight*; in which case all the evils usually ascribed to the inclusion of the vas deferens are averted. In the case to which we now allude, it appears that much distress was felt by the patient in the groin on the day following the operation, and that the constitution was also very much disturbed: two full bleedings, however, and a purgative, produced a speedy alleviation of all the unpleasant symptoms, and they did not recur, the case going on to recovery in a very satisfactory manner. We can safely say, in addition, that we have never known any dangerous or alarming symptoms to arise from the ligature of the whole cord, and that we are therefore decidedly friendly to that mode of operating.

M. DUPUYTREN† has lately recommended and practised a mode of curing *prolapsus ani*, which he considers as novel: it consists in cutting off a greater or less number of the cutaneous and projecting folds of the verge of the anus. The operation contracts the opening by drawing it together, almost in the same manner as a purse when the strings are drawn tight. Ten or twelve patients have been operated upon in this way, and have been cured, without any unpleasant symptoms. No dressing is required; attention to cleanliness being alone sufficient to produce complete cicatrization in twelve or fifteen days. We have mentioned this operation, although we do not see in what it differs from the

* Practical Observations on Cancer.

† Journal Universel des Sciences Medicales, Octobre 1822.

plan recommended by Mr. HEY, of Leeds.* We should, for our own parts, be inclined to adopt it only in extreme cases, since we do not think so lightly of operations performed about the anus as our neighbours: we are convinced that, in many instances, they are attended with considerable risk, and produce most formidable constitutional disturbance; and it is, therefore, only in those instances in which the evil is great, and life is rendered burthensome by the extent of disease, that we should urge or press upon the patient a mode of relief which we consider as by no means free from danger.

On the subject of *lithotomy*, we have one or two novelties to record: the first is a new method of opening into the female bladder, proposed by M. LISFRANC.† To this operation we have not any thing to object, but we are not aware of its having been performed in this country. Cases of calculi in the female are not very frequently occurring, and they most commonly admit of extraction without the necessity of having recourse to cutting instruments. The forceps invented by Mr. WEISS have been used upon several occasions with success, since Sir ASTLEY COOPER published his cases in the *Medico-Chirurgical Transactions*.‡ Experience fully warrants our former approval of this ingenious invention; and it, at the same time, tends to confirm us in the belief that the cautious and gradual dilatation of the urethra is, on every account, to be preferred to the completion of the whole process at one time: a question which Sir Astley was anxious to have decided by the only infallible test—that of experience.

M. ARNUSAT§ has invented an instrument for the purpose of breaking down calculi in the male bladder, and which are afterwards voided in their pulverised state. The instrument consists of a pair of pincers, concealed within a sound. No experiments have, however, yet been made with this instru-

* HEY's Surgical Observations.

† *Revue Medicale*, Janvier.—See our last Number, p. 440.

‡ Vol. xii.

§ *Bibliothèque Universelle*.

ment, excepting on the dead body. While we acknowledge the ingenuity of M. Arnusat, we cannot bestow our unqualified approbation upon this invention, or rather upon this application of an invention: in the first place, it can only be available in cases of soft and friable calculi, and cannot be supposed capable of grasping stones of any great size. These inconveniences would, of course, restrict its use in a very great degree; but we should apprehend that, in the living subject, breaking down a stone would be but dangerous practice, unless we were quite sure of reducing the calculus to such a degree of minuteness as to insure the evacuation of all the fragments; otherwise, we should probably be only leaving the nuclei of future stones, and multiplying the evil indefinitely.*

A much more judicious and scientific application of a similar instrument has been made in this country by Sir Astley Cooper, unless we are much misinformed, and in which he was fortunate enough to *extract* from the bladder of a clergyman several small calculi, by means of an instrument of Mr. Weiss's construction.

We have still one more novelty, having reference to the operation of lithotomy, to announce: it is the proposal of M. CAMPANA† to take hold of the calculus, for the purpose of extraction, by its largest diameter. We have so recently given‡ M. Campana's reasons for this practice, that we need not repeat them here. We shall offer no comment on them, but merely say we think his plan, at least, deserving of consideration.

In a late Number of a foreign publication,§ we find a letter from Mr. SANSON, relating the *recto-vesical operation*. It

* Instruments for this purpose are no novelties. We find one described by M. LEROY, the principle of which consists in sawing the calculi within the bladder. Mr. ELDETON published an account of an instrument, in the year 1819, for destroying stones within the bladder. &c. &c. All the experiments were made, however, on the dead body in both instances.

† Annali Universale de Chimie.

‡ London Med. and Phys. Journal, June.

§ Journal Complémentaire, Mars.

is in answer to a Mr. Fortis, who, in a letter to M. Riberi, has thrown much undeserved odium upon this operation, and misrepresented the result of the case in which it had been successfully performed by M. Sanson. From this gentleman's statement it appears that M. DUPUYTREN operated in this manner upon a lad, thirteen years of age, about the latter part of the year 1821; that the operation was tedious and difficult, the stone being of an enormous size, (two inches four lines in length, and one inch eight lines in breadth;) and the patient died in consequence of the formation of an enormous abscess on the thirty-sixth day. The size of the stone, and the difficulty of extracting it, in consequence of the incision having been made at first too small, and subsequently enlarged,—the forceps being found too slight to embrace and retain the stone,—all contributed to produce such a degree of irritation as to lead to the unfortunate termination of this case. It is added that M. Dupuytren has not since repeated this operation. The case operated upon by M. Sanson recovered perfectly.

Dr. PHYSICK* has recorded a case of *ununited fracture of the lower jaw*, treated successfully by passing a seton through it. Our trans-Atlantic brethren have now given us several instances of the same kind, the result of which has been equally fortunate: with us, however, these operations have not in general succeeded.

Several detached cases of operations, successfully performed, are related in the various periodical works during the last half year; but as there is nothing novel or instructive in the mode of performance, nor any particular difficulties to be overcome in the progress of the cure, we shall not waste the time of our readers by detailing them. One very remarkable story,† however, we must mention, which is the extraction of a single fork from the stomach of a man, by M. RENAUD, a surgeon at Romans, (department of the

* Philadelphia Journal, No. 9.

† Tablettes Universelles.

Drôme.) The account of this case, however, is very imperfect; inasmuch as we are merely told that the young man was considered out of danger, and *expected* to recover in a short time. The fork was eight inches long, and produced the most alarming symptoms.

We find in an Italian Journal,* a case recorded in which the *uterus* was extirpated from its natural situation by Dr. SAUTER. This appalling operation was undertaken at the pressing desire of the patient, suffering under the agonies of a cancerous affection of that organ, for which she had been under treatment from the middle of October 1821, to the 28th January 1822, the day of the operation. The woman was fifty years of age; she had borne six children, and had ceased to menstruate about four years. Having tried in vain to bring down the uterus with the index-finger of the left hand, M. Sauter introduced that and the middle-finger to the extremity of the vagina, and, with a straight knife he separated it from the uterus, cutting the termination of the vagina little by little between his two fingers. In operating in this way, his object was to draw the uterus downwards, to detach it afterwards from the cellular membrane surrounding it, either with the handle of the knife or with the fore-finger of the right hand. He found this could not be done in any way that he made the attempt; but, having advanced so far, it was necessary, he thought, to proceed, believing that the cancerous ichor would infect the cut surfaces. Re-examining the parts, he found the bladder had been wounded in separating it from the uterus, and he therefore determined to extirpate this viscus. He accordingly introduced two fingers of his left hand into the wound, between the bladder and uterus, and, cutting little by little between the fingers, he divided all the adhesions, until, with the finger which followed the borders of the uterus, he could penetrate into the *cavity of the abdomen*; he then passed the

* Annali Univ. di Medicina, 1823.

fingers of his left hand as high as possible to the lateral ligaments, seized and divided them as near as he could to the womb; he then separated it from the ovaria, from the fallopian tubes, and the other ligaments. He then laid hold of the fundus with four fingers, and tried to invert it, but in vain, as the action of the abdominal muscles *pushed down the intestines*. Having desired the patient to restrain this action, and the intestines being pressed upwards by an assistant, he inverted the womb, and drew it out between the labia; the excision was then easy. This horrible operation lasted three-quarters of an hour: only one pound and a half of blood was lost: the woman, however, fainted towards the termination. *The intestines being put back into their place*, the vagina was filled with charpie. We need not be surprised that this poor woman was troubled for several days with vomiting, and that her belly was painful; but in a short time all these symptoms disappeared, and excepting that some urine escaped from the wound, her recovery went on regularly. Suffice it here to say that, after a period of about three months and a half, the patient quitted the hospital. She, however, only remained at home seven days, and expired about a fortnight after her re-admission. M. Sauter describes this operation as not being either very painful or accompanied by much hemorrhage; but is of opinion that wounding the bladder is inevitable.—We shall offer no comment on this case!

Mr. CHURCHILL has presented us* with some additional cases of the successful employment of *acupuncture*, and promises us soon “a body of evidence,” which shall dissipate the most obstinate scepticism. For our own parts, we are not at all sceptical upon this subject: we are fully sensible that the operation has been followed by immediate and permanent relief in many instances, particularly in that of a nobleman of high rank in the county of Sussex, and who has

* London Med. Repository, May.

contributed very largely to extend its reputation, and to enlarge the sphere of its practice; but we are also aware of its having been employed in vain in fully as many cases, and that in others the benefit has only been temporary. We do not at all intend to depreciate the utility of this simple and easy remedy by this statement, but we merely wish to put our brethren in possession of the *per-contra side* of the account,—lest, if they should meet with a disappointment upon the first occasion of their applying the needles, they may hastily and rashly abandon the practice, as supposing it to be founded in delusion. Mr. Churchill very judiciously appears anxious to restrict the utility of this operation to the relief of that painful disease for which it is more particularly recommended. We shall only add, that the cases he has published are detailed in a very perspicuous, and apparently a very candid manner, and are perfectly satisfactory to our minds.

We have an account of a new operation for *artificial pupil*, by Dr. WELLER, of Dresden,* which will, perhaps, be best understood from the detail of the case in which it was performed.

“Miss L—, seventeen years old, was, in consequence of a probably scrofulo-rheumatic ophthalmia, blind of both eyes, and had been so five years, yet there remained in her right eye a feeble sensibility to light. From all circumstances, it was concluded that the inflammation had affected the whole globe. The cornea was transparent, the anterior chamber tolerably large, but the bulb somewhat enlarged, and around the cornea was a bright bluish ring in the upper part of the bulb. Sclerotic staphyloma had taken place, along with varicose vessels; the iris was spongy, and the pupil closed from firm exuded lymph, and drawn tunnel-formed backwards; and the ciliary margin, here and there, adherent to the cornea. In this eye, according to our author, no one

* Quarterly Journal of Foreign Medicine, &c. April.

could perform iridodialysis, because the iris, on account of the firm adhesion, would not have admitted of separation, and the instrument must have torn the iris. He proceeded, therefore, in the following manner :

“ He pierced the cornea with a cataract-knife half a line from its circumference, towards the outer angle of the eye ; introduced through this opening a hooked needle, which was not larger than the cataract-hook of Beer, but bent in a larger circle, therefore more of a needle-shape ;—not round in the convex part, but in the first part of the bending a little broad, and in the outward sharp-pointed end lancet-shaped ; in both edges fully rounded and blunt. It was introduced into the anterior chamber, so as that the edges of the point were directed upwards, and those of the handle downwards : the point itself, however, which was turned neither towards the iris nor the cornea, he pushed suddenly through the anterior chamber to within a line’s breadth of and above the still perceptible pupillary margin, towards the angle of the eye ; then, without injuring the iris, he turned the instrument so that the sharp point immediately touched its internal and upper part, and, gliding perpendicularly downwards upon the anterior surface, made a superficial incision of the length of the half of the entire breadth of the anterior chamber ; in which operation so little pressure was applied, that the iris was only incised, not cut through. After this incision, the instrument was turned backwards from below upwards to the middle of the incision : the iris was pierced through with the point. The instrument was then withdrawn somewhat towards the point of entrance ; through which manœuvre a tolerably long, but, on account, of the lying behind cataractous lens, irregular, unequal, slit in the iris was produced. The instrument was now, with the edges of the pointed end upwards, and with those in the handle downwards, carried in a horizontal direction again along the sort of engraving in the iris, and afterwards into the incision made in its substance. It was pushed forwards and inwards, nearly half a line farther, towards the internal

angle; and, without minding the iris set free, so turned, that the edge of the lens, which is directed towards the internal angle of the eye, could be seized fast with it. Now the instrument was so turned that the pointed edges were situated half inwards and upwards, those on the handle half outwards and downwards, and carried backwards towards the corneal opening, by which the whole lens was pulled, with its perpendicular axis, into the newly-formed pupil, and in such way that the internal margin of the lens was before, the external behind, and the posterior surface turned towards the inner angle of the eye, the anterior towards the external. Dr. Weller attempted, by varied movements of the instrument, to tear as much as possible the cataractous substance, without thereby forcing the lens out of the newly formed pupil; and then drew out the needle, with the edges directed in such a way as not to lacerate the wound in the cornea.

“The new pupil was apparently large, oval-shaped, and its situation in the middle of the iris, though rather somewhat turned towards the internal angle. The cataract stretched so far into the anterior chamber as almost to touch the cornea; the bleeding of the iris was not remarkable. On account of head-aches which supervened, and also of sparks of fire seen by the patient, a proper quantity of blood was taken from the arm, and ten leeches applied, which removed those symptoms.—Morning and evening, a grain of calomel was administered, and the most severe regimen observed. In thirteen days, the absorption was remarkable; three weeks after the operation, there could only be seen a thin tissue in the pupil. In other fourteen days, even this was removed, and the pupil appeared fully black. The patient could distinguish colours only tolerably, could see the window, and perceive a man standing before her, as through a mist, because the retina had been injured by the inflammatory process which had preceded the operation.”

We presume to give no opinion on this case: indeed, it is with difficulty that we are able to pursue the surgeon

through the various steps of the operation; and we feel almost inclined to say, with old Gobbo, when puzzled by the direction to the Jew's house, " 'Twill be a hard way to hit."

A Report has been made by Baron PERCY to the French Institute, upon a new instrument (*kystitome caché*,) for the extraction of the cataract, invented by Dr. BANCAL. This report is altogether highly in favour of the invention, or rather the alteration of the instrument as formerly employed by LAFAYE, and described in the memoirs of the Academy of Surgery. The inconveniences of Lafaye's instrument were, that it was difficult to fix it steadily in the hand, from the roundness of the handle; it operated from below upwards, which rendered it less manageable; and there were no means of graduating or proportioning the length of the blade which should issue from the sheath: besides which, it required some degree of force to produce that effect, and consequently a vacillation was produced, highly necessary to be avoided among parts of so delicate a structure. These inconveniences are got rid of in M. Bancal's instrument, of which we lately presented our readers with a description.* The commissioners say that this instrument performs its office admirably. It is held like a writing-pen, and is as easily managed. "We are persuaded, (they add,) that in all those cases where it is necessary to disengage the crystalline lens from all its attachments, to divide and to open the firm and thick capsule that confines it, no instrument can be superior to that of M. Bancal; the use of which will be established and extended by the result of some trials lately made at Paris, confirming the satisfactory account of those which took place at Bordeaux."

Professor THAL,† of Copenhagen, has invented a *rotation saw*, but of which we shall not be able to give a very intel-

* *Revue Medicale*, Fevrier.—*London Med. and Physical Journal*, May.

† *Edinburgh Med. and Surg. Journal*, January 1823.

ligible account without the assistance of an engraving. The following description will, perhaps, convey some idea of the construction and powers of this instrument :

“ To make a short, deep, straight incision, with a saw, in a large flat bone, by the instrument at present in use, or with which I am acquainted, if not impossible, is at least a very difficult task. One which, in my judgment, is more suitable for this purpose, is constructed in the following manner :

“ 1. A piece of thick watch-spring steel is formed into a circular plate or segment of a circle ; its edge is furnished with coarser or finer teeth, which resemble in figure an isosceles triangle, with the angle at the apex equal to sixty degrees.

“ 2. The saw is fixed at right angles in the middle point (centre) from its cutting edge, to a steel rod of indefinite length, the opposite end of which has a handle like that of the trephine.

“ 3. Near the saw, the steel rod passes through a metallic cylinder or box, which is fixed in a flat wooden handle, perpendicular to the steel rod.

“ 4. According to circumstances, there are several saw-blades, commonly circular plates or segments, the teeth of which are fewer or more numerous, larger or smaller.

“ The manner in which I myself use this instrument, which may be named a rotation-saw, is as follows :—I allow the handle of the brass box to rest on the fore-finger of the left hand, and with the thumb and other fingers I hold it steady, while I fix the saw on the bone which is to be divided, and make rotation with the right,—either with the whole hand, when this is practicable, or with the thumb, fore and middle finger, where there is not room for the whole hand. Each saw, therefore, may also be screwed on, parallel or perpendicular to the direction of the rotation-handle.

“ The expedition with which this instrument, after a little practice, works, cannot be accurately determined. I cut

through, in the presence of the secretary of our Society and others, on a subject having middle sized bones,

A cranium $2\frac{1}{2}$ lines thick, in 15 sec.

The ulna transversely near the carpus, in 15 sec.

The metacarpal bone of the middle finger, in 18 sec.

The ulna longitudinally near the carpus, in 15 sec.

In nearly the same time I have cut through a clavicle and a rib, by this instrument, which may be used even on a hollow flat bone."

We may observe, that the editor of the Edinburgh Journal, who is in possession of one of these saws, says, "that, though not so dextrous in its use as Professor Thal, we have found it work well; and that, to use it with effect, the fixed handle must be kept very steady, and the rotation handle moved lightly."

When we come to enumerate the various works, both English and foreign, relating more particularly to surgery, and which have been published within the last half-year, we find little to congratulate ourselves upon. Among the most prominent of those published in our own country, is a volume upon *Diseases of the Urine and Urinary Organs*, by Mr. HOWSHIP, and of which we shall, in an early number, attempt an analysis:—we say attempt, because the work is, from the circumstance of its doctrines being almost in every instance illustrated, and explained principally, by cases, by no means an easy task for a reviewer. A little treatise on *Operative Surgery* has also been published by Mr. AVERILL, the execution of which is highly respectable: it contains a great deal which is very modern, especially some of the modes of operating adopted in France, and will most undoubtedly be a very useful work to students, for whom it is principally designed. Of Mr. BRIGGS' translation of SCARPA on *Cancer*, we have already expressed our approbation, and given a detailed account.—This is a meagre catalogue indeed, but, with the exception of a second edition of

SIR A. COOPER'S work on *Dislocations*, it comprises every thing of importance that we have met with. The foreign publications are—two treatises on *Hospital Gangrene*, one by M. RIBERI, of Turin, the other by M. OLLIVIER; a systematic work on *Acoustic Surgery*, by M. ITARD; and a treatise by M. DUCAMP, of Paris, on *Strictures and Retention of Urine*.

There is a great coincidence of opinion in the two writers upon *Hospital Gangrene*: they, in the main points, agree with a countryman of our own (Mr. BLACKADER), who wrote a very sensible work on this disease, and whose statements and opinions are in a great measure confirmed by the authors above mentioned. Instead of the mineral acids, MM. Ollivier and Riberi strongly advocate the use of the actual cautery.

We shall do little more than mention M. Itard's work on the Diseases of the Organ of Hearing. The principal point of interest in these volumes is the proposal to inject the tympanal cavity, and which may either be done by opening into the mastoid cells, through the membrane of the tympanum, or through the eustachian tube: the first is not considered safe; the second is, according to our author, the only method likely to succeed in cases of congenital deafness. He employs simply warm water, but the injection is repeated ten or twelve times a-day. There is at first usually a good deal of pain produced, and other unpleasant symptoms; but, when the tube begins to be freed from its obstructions, which is known by the water escaping by the throat, the patient gradually recovers his hearing. The method of injecting the eustachian tube is next described: it is evident, however, from the details that this is an operation of much nicety, and that numerous trials must be made upon the living and dead body, before it can be practised with any thing like a prospect of success. Upon the whole, we hope that we do not pass too severe a judgment upon M. Itard's work, by saying that it does not materially advance our knowledge of the subject of which it treats.

great pain, with a sensation "as if something would force itself away, and tear her inside to pieces." There was some mucous discharge from the vagina, which was so thickened and altered as to render an examination extremely difficult. This, however, was at length accomplished, and a tumor, rather larger than a goose's egg, was discovered behind the os uteri, "high up, and rather to the left side." What follows we give in the words of the author.

"By the latter end of February, she had so far recovered as to be able to visit her friends, and on one occasion ventured to ride, in a stage-coach, the distance of ten or fifteen miles, without material inconvenience, till a morning or two after her return, when she was found by her servant in a swoon, lying on the floor: she soon recovered, and therefore did not take particular notice of the occurrence. On the 10th of March she dined with some friends in the city, three miles from her residence, came home early in the evening, and took a light supper. The morning following, I was called in haste to see her: she was on the sofa in a fainting fit, from which she was with difficulty restored; at every attempt to raise her, she swooned afresh. As soon as she was sufficiently recovered, she was put to bed, when she complained of violent throbbing in the pelvis, extending to every part of the abdomen, and accompanied with great thirst, sickness, fainting, a violent bearing-down pain, and a constant inclination to make water. I examined, and found the tumor occupying a much larger portion of the pelvis than formerly; but, as no fluctuation was perceptible, I could not compare it to any thing else but a collection of hardened feces in the rectum; an examination per anum conveyed the same feeling. I ordered an emollient enema to be injected, prescribed opiates to allay the violence of her pain, and bled her, the pulse having become strong and frequent. The os uteri was not much altered since my last examination, yet she considered herself in the eighth month of pregnancy, and, fully conceiving herself in labour, desired me not to be from home: the pains were so acute, that she

declared she could not survive greater agony, and that it was like tearing her to pieces to move even her limbs. The night became one of extreme anxiety and restlessness; thirst, sickness, and fainting continuing, which no remedies would relieve. I visited her early in the morning, (being the 12th,) and despatched a messenger for Dr. Gooch. In the interim I prescribed a saline draught, and was again sent for in great haste about half past twelve o'clock. She had been out of bed to the night-chair, where she fainted. I assisted her friends in placing her on the bed, and sent for my neighbour and friend Mr. Scott, surgeon, of Romney-street, who came directly, but not in time to see her before she expired, which took place a few minutes after I came to her assistance.

" This unforeseen event induced me, in concert with Mr. S., to propose to her friends the chance of saving the life of the infant by the Cæsarean section, which proposition Dr. Gooch, who had by this time arrived, joined us in recommending, and which being acceded to, I immediately performed.

" *Dissection.*—Having divided the abdominal parietes from the umbilicus to the pubes, a large quantity of fluid and coagulated blood escaped, to the amount of several quarts, and exposed to view a large substance, very much resembling, in size and appearance, the head of a fœtus, protruding from the external surface of the uterus; but which, on closer inspection, I found to be the larger one of two semi-cartilaginous substances, growing by small necks from near the right horn of this viscus. After removing the blood, which was diffused in every direction among the bowels, the uterus appeared perfectly entire, but irregularly and enormously enlarged. Turning a little to one side, I found the fœtus, which was lying loose among the intestines, and immediately directed my finger along the umbilical cord to the placenta, which was firmly attached within a membranous sac on the left and posterior side of the womb. I removed the fœtus, which was a female about the fifth

M. Ducamp's treatise on Strictures, &c. we consider as a much more valuable book in France than it is likely to prove on our side of the Channel; since, with the exception of his particular method of applying caustic to the urethra, and his subsequent employment of dilators, there is not much but what is to be met with in the writings and the practice of the best English surgeons. In saying this, we hope we are rather adding to than detracting from the merit of M. Ducamp,* whose work evinces great research, a thorough acquaintance with this branch of English surgery, and is culculated to do much good, in his own country especially. On the subject of dilatable stricture, indeed, English surgeons are ever still apt to be misled. The disease is one of the commonest affections of the male urethra: it is the foundation, if neglected, of permanent stricture; and the symptoms are often so equivocal, and so easily mistaken for slight attacks of gonorrhœa, particularly as a little purulent discharge, coming on after connexion, is one of the most frequent symptoms,—that it too commonly happens to be overlooked, and the discharge is stopped by cubebs, copaiba, or some astringent injection; either of which remedies, will most commonly, produce a calm or a cessation of the discharge. Hence so much contest as to the diverse treatment of gonorrhœa; hence so much contradictory evidence as to the value of one medicine above another, in the treatment of that disease. The real source of the evil, meanwhile, will be found in the urethra: it is cured only by the use of metallic bougies; and under their use the discharge ceases, the unpleasant frequency of making water disappears, and the whole man, before languid and debilitated, appears to revive.

We had hoped to have had an opportunity of saying something relative to *diseases of the spine*; but, as Mr. SHAW'S

* We are sorry to notice the death of this promising young man in a late Number of a foreign Journal.

work has not yet made its appearance, we shall postpone our remarks until our next Retrospect, when we shall make some observations upon that subject generally, including Dr. HARRISON's cases and plan of cure.

We are in possession of some additional testimonies in favour of *iodine* as a remedy in *bronchocele*, and which we intend to lay before our readers in the ensuing Number of this Journal; though we fear that, with the exception of that complaint, its internal exhibition has not been attended with the advantages anticipated from its employment in other forms of glandular disease.

MIDWIFERY.

Little of novelty has occurred in this department; the only publications worthy of notice relative to this branch of our profession being those of Drs. CAMPBELL and MACKINTOSH on *puerperal fever*, to which we have already referred, and in which the antiphlogistic treatment of the disease is very strongly urged.

Various detached cases, remarkable rather for their singularity than their practical importance, have been given to the public: one of these consists in an account of the rupture of the uretus and rectum, followed by parturition through the anus, which is described in the London Medical Repository for March.

The only other case worthy of notice occurs in the same Journal for June. A lady, thirty-eight years of age, and of full habit, had been affected for five years with symptoms referable to the uterus, and which had excited apprehensions of cancerous disease of that organ. She had been many years without children, but became pregnant in consequence of a second marriage. Mr. PAINTER, by whom the case is related, was called to see her in November, in consequence of pain in the loins, extending round the abdomen; head-ache, restlessness, and irritability of the stomach. She had a troublesome cough, which gave her

great pain, with a sensation "as if something would force itself away, and tear her inside to pieces." There was some mucous discharge from the vagina, which was so thickened and altered as to render an examination extremely difficult. This, however, was at length accomplished, and a tumor, rather larger than a goose's egg, was discovered behind the os uteri, "high up, and rather to the left side." What follows we give in the words of the author.

"By the latter end of February, she had so far recovered as to be able to visit her friends, and on one occasion ventured to ride, in a stage-coach, the distance of ten or fifteen miles, without material inconvenience, till a morning or two after her return, when she was found by her servant in a swoon, lying on the floor: she soon recovered, and therefore did not take particular notice of the occurrence. On the 10th of March she dined with some friends in the city, three miles from her residence, came home early in the evening, and took a light supper. The morning following, I was called in haste to see her: she was on the sofa in a fainting fit, from which she was with difficulty restored; at every attempt to raise her, she swooned afresh. As soon as she was sufficiently recovered, she was put to bed, when she complained of violent throbbing in the pelvis, extending to every part of the abdomen, and accompanied with great thirst, sickness, fainting, a violent bearing-down pain, and a constant inclination to make water. I examined, and found the tumor occupying a much larger portion of the pelvis than formerly; but, as no fluctuation was perceptible, I could not compare it to any thing else but a collection of hardened feces in the rectum; an examination per anum conveyed the same feeling. I ordered an emollient enema to be injected, prescribed opiates to allay the violence of her pain, and bled her, the pulse having become strong and frequent. The os uteri was not much altered since my last examination, yet she considered herself in the eighth month of pregnancy, and, fully conceiving herself in labour, desired me not to be from home: the pains were so acute, that she

declared she could not survive greater agony, and that it was like tearing her to pieces to move even her limbs. The night became one of extreme anxiety and restlessness; thirst, sickness, and fainting continuing, which no remedies would relieve. I visited her early in the morning, (being the 12th,) and despatched a messenger for Dr. Gooch. In the interim I prescribed a saline draught, and was again sent for in great haste about half past twelve o'clock. She had been out of bed to the night-chair, where she fainted. I assisted her friends in placing her on the bed, and sent for my neighbour and friend Mr. Scott, surgeon, of Romney-street, who came directly, but not in time to see her before she expired, which took place a few minutes after I came to her assistance.

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month : it appeared to have been dead some days. I afterwards removed the uterus and parts connected with it, together with the fœtus : the whole weighed, in their exsanguineous state, upwards of six pounds. The parts concerned in this extraordinary case are preserved, and in my possession.

“ At my leisure, I separated the placenta, which adhered firmly to the substance of the ovarium, and to a great part of the internal surface of the membrane which enveloped the fœtus. I afterwards made a section of the uterus, commencing an inch from the os tinæ, and carrying it through the anterior part of the fundus. This viscus was enlarged and diseased in a remarkable degree: its parietes were very greatly thickened, and in a very irregular manner, owing to the developement of tumors in its texture, which appeared to originate in an infiltration of lymph, which had become organized, and presented a dense and semi-cartilaginous appearance: this had taken place chiefly towards its external surface, giving the uterus an irregular form. Two of these tumors protruded from this viscus, as was just noticed, and were attached to it by narrow pedicles. The internal surface of the uterus was regular, and presented an appearance resembling the decidua: the uterine cavity was not much enlarged. On inspecting narrowly the internal surface of the womb, in order to find the canal running from the cornua into the fallopian tubes, this passage could not be detected; and on making the examination from the fimbriated extremities, after having detached some of these fimbriæ from the adhesions they had formed, the fallopian tubes were ascertained to be quite impervious throughout. The right ovarium was entire. The fœtus was formed in the left ovarium: the duplicature of the peritoneum enclosing this organ constituted the more external covering of the fœtus; its internal one was its own proper membranes. The placenta was intimately connected with the structure of the ovarium, and appeared to be attached to it without any intervening texture. The pla-

centa was consequently supplied from the vessels of the substance of the ovarium: no other vessels than those belonging to this viscus could be observed to be externally connected with the sac enclosing the fœtus, and those were greatly enlarged. The rupture of the enveloping membranes, which occasioned the fatal hemorrhage, had taken place on their superior and anterior sides, not far from the womb, and had torn a portion of the placenta."

This case very strikingly resembles that described by Dr. GRANVILLE in the Philosophical Transactions for 1820.

The *Secale cornutum*, or ergot of rye, which was deemed so deleterious by the French, in 1774, as to be proscribed by a legislative act, has of late attracted the notice of American physicians, having been recommended, so early as 1807, by Dr. STEARNS, of New York, as possessing certain specific powers over the uterus, "more certain than tartrite of antimony upon the stomach, or jalap upon the intestines." According to Dr. Stearns, the ergot is indicated, and may be advantageously given, under the following circumstances.

"1. When, in lingering labours, the child has descended into the pelvis, the parts dilated and relaxed, the pains having ceased, or being too ineffectual to advance the labour, there is danger to be apprehended from delay, by exhaustion of strength and vital energy, from hemorrhage or other alarming symptoms.

"2. When the pains are transferred from the uterus to other parts of the body, or to the whole muscular system, producing general puerperal convulsions.

"3. When, in the early stages of pregnancy, abortion becomes inevitable, accompanied with profuse hemorrhage and feeble uterine contractions.

"4. When the placenta is retained from a deficiency of contraction.

"5. In patients liable to hemorrhage immediately after delivery. In such cases the ergot may be given as a preventive, a few minutes before the termination of the labour.

"6. When hemorrhage or lochial discharges are too pro-

fuse immediately after delivery, and the uterus continues dilated and relaxed without any ability to contract."

On the other hand, we are informed that—

"1. It should never be administered when nature is competent to a safe delivery.

"2. It should never be administered until the regular pains have ceased, or are ineffectual, and there is danger to be apprehended from delay.

"3. It should never be administered until the rigidity of the os tincæ has subsided, and a perfect relaxation induced.

"4. It should never be administered in the incipient stages of labour, nor until the os tincæ is dilated to the size of a dollar.

"5. It should never be administered in any case of preternatural presentation that will require the fœtus to be turned.

"6. It should never be administered, during the continuance of one labour, in larger quantities than thirty grains by decoction in half a pint of water."

The ergot, when judiciously administered, is said to possess the property of exciting the uterus to contraction; and an instance is cited by the author above mentioned, in which an accoucheur, being anxious to set out upon a journey, gave the ergot to a lady whom he was engaged to attend, before any symptoms of labour had made their appearance. In an hour after, labour had begun, and proceeded through its regular stages to a safe termination. This proceeding, although it tends to illustrate the effect of the medicine, is justly condemned by Dr. Stearns as altogether unwarrantable. Under the precautions which we have quoted, the efficacy of the ergot is said to be very striking; being followed in from five to twenty minutes after its exhibition, by a bearing-down effort, which gradually increases, and goes on without any intermission till the delivery be completed. It is this uninterrupted action of the uterus which renders the remedy so improper when the presentation is unfavourable,

as any attempt to turn the child must, of necessity, prove abortive, and even dangerous.

With respect to the dose, we are informed that a tablespoonful of the decoction, (gr. xxx. to ℥ss. of water,) given every ten minutes, generally answers better than a larger dose, as it does not affect the stomach with nausea or vomiting; an operation which sometimes interrupts its action on the uterus. It is asserted that the ergot does not produce abortion, although it has frequently been given for this purpose.*

CHEMISTRY, PHARMACY, AND BOTANY.

This ESSAY has already encroached so much on the Journal, that our remarks on these branches of science must be very laconic. The most important discovery in chemistry, is the *condensation of the gases*, by Mr. FARADAY, of which we have already given an account.† Several improvements in the preparation of various medicines have likewise been detailed,‡ chiefly taken from the French.—In botany, nothing has occurred worthy of particular remark.

* American Medical Recorder, No. xx.

† Number for May.

‡ See our INTELLIGENCE in various preceding Numbers.

REVIEWS.

Quidquid venerit obvium, loquamur
Morosa sine cogitatione.

MARTIAL.

ART. XII. *The Dublin Hospital Reports and Communications in Medicine and Surgery.* Volume the Third, Octavo, pp. 500, three plates. Dublin, 1822.

(From the Medico-Chirurgical Review, June 1823.)

THE Dublin Hospital Reports continue to uphold their character, as unquestionably the first work of the kind which now issues from the periodical press. How long they may persevere in this course of zeal and talent, we shall not venture to predict, since the history of such works gives us the mortifying information that every publication of the kind has, in time, degenerated from its pristine vigour. This affords no proof, though a strong probability, that a similar fate awaits the work before us, as well as every other of the present day. But we have no business with prognostications; our duty is to exhibit the actual state and condition of the works before us.

This volume contains nineteen communications, the first of which, Dr. Cheyne's report on dysentery, we have analysed with Dr. O'Brien's work on the same subject, in a separate article. The second paper then is a—

Report of Cases of Aneurism in the Richmond Surgical Hospital. By CHARLES H. TODD, one of the Senior Surgeons to that Establishment.

THE operations for aneurism, though now-a-days not rare nor timidly executed, are yet sufficiently interesting to de-

serve commemoration. The ligature of the external iliac, carotid, and subclavian arteries, is one of the proudest boasts of modern surgery.

In respect to the operation on the external iliac, Mr. Todd adopted the mode described by Sir Astley Cooper, in preference to that recommended by Mr. Abernethy. This preference was given after repeated trials on the dead and on the living subject, because "Sir Astley Cooper's method afforded the operator a greater facility of applying the ligature to the artery, more room being obtained by it, and with less disturbance of the peritoneum than by the other mode." When, however, it is necessary to apply a ligature to a higher part of the artery, Mr. Abernethy's method may, he thinks, be employed with advantage.

The two cases that terminated fatally exhibited not the slightest traces of peritoneal inflammation, and in both, the collateral circulation was quickly and effectually established.

"The cases of popliteal aneurism are related chiefly with a view of recommending a more general adoption, than is at present practised, of a preparatory course, previously to operation. I can scarcely doubt but that in many cases of aneurism, in which operations have failed, from mortification of the limbs succeeding, the patient might have been saved by a delay sufficient to allow some progress to be made in establishing the collateral circulation; and I feel confident that this desirable object may be promoted in most instances of recent disease, situated at a sufficient distance from the trunk, by compressing the principal artery of the limb for a few hours every day, for a period which must vary according to the circumstances of the case." P. 94.

In some instances, however, notwithstanding every effort to diminish the force of the circulation, an aneurism will increase rapidly—in which case, delay must not take place, and the operation must be resorted to before the tumor has acquired such magnitude as to endanger the soundness of the integuments. If the health also suffers from local pain or irritation, the operation cannot safely be postponed.

Case 1. A young woman, 22 years of age, of robust habit, and florid complexion, was admitted into the Richmond Hospital on the 26th of May, 1819, having a large oblong tumor on the superior and anterior part of the thigh, close to Poupart's ligament, beyond the plane of which it projected considerably, and ascended so much that the ligament was arched across the upper part of the swelling. Fluctuation was evident, although the tumor was tense; but no pulsation could be felt, and the superincumbent integuments were not discoloured.

"On the inner side of this tumor, and extending to the left labium, a smaller tumor existed, between which and the large one there appeared to be a direct communication at their bases, although a depression of the skin divided them on the surface; this tumor was also tense, with fluctuation; but its integument was healthy. The thigh, leg, and foot were slightly œdematous; the patient complained of pain on the inside of the knee, and of some numbness of the entire limb—her pulse was perfectly regular; she had no palpitation of the heart or oppression of the chest, and her general health was in every respect unimpaired. Pressure upon the external iliac artery did not affect the size or tension of the tumors; neither were they perceptibly diminished by pressure directly applied to them. No pulsation could be discovered in the course of any of the large arteries below the tumor, although the temperature of the limb corresponded exactly with that of the other." 97.

She said that for four or five months previously, she had felt pains about the groin, at first slight, but gradually increasing. She next perceived the tumor, but denied the existence of pulsation in it at any period.

Two days after admission, (28th May) our author proceeded to make an oblique puncture into the tumor with a very small lancet, when a dark-coloured fluid blood flowed from the wound in a gentle but continued stream. When a director was introduced, the blood flowed more rapidly, and carried with it small coagula and particles of colourless

fibrine. The wound was closed by adhesive plaster. On the 1st of June, the tumor, having increased in size and become more painful, so much resembled an abscess, that another puncture was made with the same result as before. On the 2d of June, the circumference of the diseased thigh, including the tumor at its most prominent part, measured $19\frac{1}{2}$ inches, while that of the other limb was three inches and a half less. In consultation, it was agreed that the ligature of the iliac artery presented the only prospect of relief, and on the 3d of June, it was performed in the manner recommended by Sir Astley Cooper. On the ligature being tightened, the patient did not complain of any particular sensation in the limb, nor was there any evident alteration produced in the tumor. In the evening there was numbness, with some decrease of temperature in the limb—pulse 100, skin hot and dry. Venesection, effervescing draughts, &c. Sickness at stomach, and pulse at 120, were noted on the 4th of June. On the 7th, there was some hæmorrhage from the tumor, which was considerably diminished in size. The bleeding was easily suppressed. On the 8th, the discharge is profuse—coagula come away freely, some resembling putrid blood—others of a yellow colour, and pulpy gelatinous consistence. We cannot follow the daily detail of symptoms; but have only to state that she died, worn out with pain, irritation, fever, and discharge, on the 17th of June, about a fortnight after the operation. We shall give the dissection in the words of our author, by which our surgical readers will be enabled to judge whether this was really an aneurism, or a fungoid or hæmatode tumor. We are inclined to the latter opinion.

“The tumor was laid open to its fullest extent, and its putrid contents having been washed out, the internal surface presented a very irregular appearance; no trace of a distinct sac could be observed. The small branches of nerves, which seemed to have resisted the putrefactive effects of the contents of the tumor, were completely insulated, and extended through the cavity unaccompanied by veins or arteries.

The muscles, except where they formed the walls of the cavity, were healthy, but somewhat paler than natural. Rather more than three inches of the femoral artery was wholly destroyed; the upper extremity of it was found in a contracted state, immediately below Poupart's ligament. The lower part of the artery contained a coagulum, which filled its cavity for several inches; the outer surface of this coagulum was very firm, of the colour of fibrine, and in close apposition with the internal surface of the artery; the red globules and more liquid parts of the clot were contained within this fibrous layer, which gave the coagulum a tubular appearance. The anterior part of the crural vein, immediately below the ligament, and where it lies parallel to the artery, was destroyed for more than an inch, and thus opened into the cavity of the tumor.

"The external iliac artery contained a firm clot, which extended from the point at which the ligature was applied to the orifice of the internal iliac. This clot adhered very closely to the internal coat of the artery, and when torn from it, the latter appeared vascular and villous.

"The ligature was quite detached, and had every appearance of having been so for some days." 111.

The second case presents no ambiguity. The patient was a printer, 28 years of age, who had received a blow from the handle of the press on his left groin, about six or seven months previously. Soon after this injury, a small pulsating tumor was perceived in the part, which gradually increased, and presented the following appearances on admittance into the Richmond Surgical Hospital, on the 14th November, 1820.

"His countenance is pale and sallow; his stature is low; his limbs small, and he appears to possess a weak and delicate constitution. Immediately below Poupart's ligament, on the left thigh, there is an aneurism of the femoral artery; the tumor is as large as a swan's egg; it pulsates strongly; pressure above the tumor suspends the pulsation, and the swelling almost entirely subsides; the integuments are

healthy ; about two inches below this, and in the line of the femoral artery, there is another tumor of great magnitude, and of a globular figure ; it extends to the internal condyle of the femur ; has a tense firm feel, with an obscure fluctuation ; the integuments are of a dusky yellow colour, and are traversed by three or four enlarged veins." 112.

When horizontal, no pain in either tumor. There is some numbness in the leg. He was kept in the hospital till the 4th of December, during which his general health improved by proper diet and medicines. On the above day, Mr. Todd tied the external iliac artery without any difficulty. The ligature drawn, the pulsation in the inguinal tumor ceased, and the tumor itself became flaccid. The lower tumor remained unaltered. On the 7th, we observe that there was some tenderness near the wound, the pulse being 112. Venesection ad $\frac{3}{4}$ x. The inguinal tumor has acquired a solid feel, and pressure has no effect in diminishing its bulk. The lower tumor is smaller, and much softer than before the operation. On the 8th, he was again bled, having some uneasiness in the lower part of the abdomen, with head-ache. On the 25th, the ligature came away—the wound is healing—the tumors much diminished, and free from pain—the countenance improved—good appetite—bowels regular—pulse 80. On the 28th, a profuse hæmorrhage suddenly took place *per saltum*. Pressure stopped the flow—a composing draught was exhibited—and the strictest quietude enjoined. The wound was left uncovered. December 30th, a hæmorrhage this evening to the amount of six ounces, which was suppressed, as before, by moderate pressure. His bowels are confined, and a circumscribed tumor, with pulsation, is indistinctly felt, in the abdomen, to the left side of the umbilicus. No hæmorrhage recurred after this till the 15th of January, when a considerable flow took place. It was now determined to apply a ligature to a higher part of the artery.

"While we were fixing the patient on the operation table, a profuse hæmorrhage took place, which was stopped by

Mr. Cusack pressing with his finger at the bottom of the wound, until I inclosed the iliac artery in a ligature. This was effected without difficulty, an incision having been made through the abdominal parietes, in the direction of the artery, as recommended by Mr. Abernethy, so that this and the former incision somewhat resembled an inverted T. The patient bore the operation with great fortitude, and his progress was as favourable as could have been expected for several days. On the evening of the 21st, however, he had a very severe rigor, which continued for almost an hour; this was succeeded by an hot fit of a few minutes duration, and the paroxysm terminated in a profuse sweat, which lasted for some hours, and weakened him exceedingly." 119.

On the 22d of January, symptoms of trismus, and ultimately, of tetanus, came on, and terminated the patient's existence in two days.

"*Dissection.* The larger tumor was found to consist of an irregular sac, with which the femoral artery communicated by a small aperture, which had the appearance of a rent in the coats of the artery anteriorly; the sac was formed of all the contiguous structures, and its internal surface was dark coloured, and very unequal; its contents were grumous blood, almost in a state of solution, and some soft coagula of lymph.

"The femoral artery, at the place of the first ligature, was open at both extremities, but the superior orifice appeared actually dilated; and we could not discover that any process had taken place here tending to the obliteration of the artery. It was a matter of surprise to those who attended the dissection that hæmorrhage had not sooner occurred, and that it did not prove immediately fatal.

"The ligature applied in the second operation was completely detached from the artery, and lay loose in the wound; here the orifices of the artery were closed, and a coagulum of more than a inch in length occupied the upper extremity." 121.

The third case, was a farmer, aged 30 years, of a florid

complexion, and delicate habit, admitted the 30th of June, 1820, for aneurism in the right ham. After hard labour in ploughing, five weeks previously, a pain and swelling of the leg took place, and soon a tumor in the ham was perceived, rather larger than an egg, and pulsating strongly. The contents of the sac were quite fluid, as it could be emptied completely by pressure. The disease being so recent, the patient was confined to the horizontal posture, put on low regimen, and occasionally bled and purged. Our author next contrived an ingenious truss, the pad of which being placed in the line of the crural artery, controlled the circulation in the femoral artery, at the same time that the collateral vessels suffered little or no compression. After a trial of several weeks, the patient could not be persuaded that any advantage was gained. The tumor, however, had obviously diminished, and its contents had acquired a firm consistence. The patient complaining that his health and spirits were suffering by the confinement and low regimen, it was determined to operate. In this case, two ligatures were applied, though our author considers, that little or no advantage is thereby gained, but that, on the contrary, the second ligature may prove an additional source of irritation. He proved a very troublesome patient—much constitutional disturbance ensued—but he was ultimately discharged cured, the knee-joint being still very stiff, but the tumor much diminished. He was afterwards seen in good health and the tumor quite gone.

The fourth case was very similar to the foregoing. Preparatory treatment was employed, and the operation succeeded perfectly. The fifth case was an aneurismal tumor on the posterior part of the right fore-arm, for which Mr. Todd tied the brachial artery, at about two inches above the internal condyle of the humerus, when the pulsation in the tumor, and in the radial and ulnar arteries, immediately ceased, the pain, also, greatly subsiding. This patient perfectly recovered.

In a subsequent part of the volume, Mr. Todd has relat-

ed a case of unusually large aneurism of the right axillary artery, in which the subclavian was tied. This case will be found detailed in the third volume of this Review, page 402, *et seq.* and forms one of the noblest trophies of modern surgery.

The next paper in the volume of Transactions under review is a—

II.

Report on Puerperal Fever, in answer to Queries from the General Board of Health. By JOHN C. DOUGLAS, M. D.

DR. Douglas admits, that the present paper bears the character of "a hasty composition," and that it would admit of amplification; but for our own parts, we often prefer a hasty to a studied composition, in the relation of medical facts, as being less liable to a *tinge* in passing rapidly through the channel of the mind.

To the first Query, respecting the epidemic and recurrent character of puerperal fever, Dr. Douglas answers that, except in the lying-in hospital, he cannot say that he ever saw the disease epidemic. In the hospital he resided during the years 1809-10-11, and in that time, puerperal peritonitis "was decidedly *endemic*." The sporadic cases of the disease met with in private practice, he thinks, may be subdued in the course of a few days, if judiciously treated. He imagines that the fatal cases, of the casual fever, whether in hospital or private practice, would scarcely rate so high as one in six; "whereas, in the truly epidemic fever, hardly one half of those absolutely attacked recover." This last he considers to be a very aggravated modification of, if not a quite different disease from the sporadic fever.

To the second Query, whether he has known the term puerperal fever applied to diseases differing in their nature? our author answers—

"It is customary to apply the term puerperal fever to diseases very considerably, although not entirely different;

different both with respect to their exciting cause, and as to the type of their pyrexia, although always similar in their great leading characteristic—abdominal inflammation and pain. I have for many years been of opinion, that there is not a greater difference in the type of that pyrexia, which accompanies a case of any purely inflammatory disease, as phrenitis, pleuritis, &c. and from such down through every grade of fever to the plague itself, than there is between the type of the pyrexia, attending a casual* case of puerperal fever, and of that attendant on the true puerperal epidemic; and I feel myself justified in attributing the discrepancies of opinion, every where existing with regard to the nature, and the various and even opposite modes of treatment recommended by different authors for the cure of puerperal fever, to deficiency of nosological distinction.” 144.

To the third Query, is it contagious when epidemic? Dr. Douglas answers in the affirmative, “but, for the most part, only to lying-in women.” He believes, however, that a woman, either pregnant or while nursing, or even a very delicate female for several months after lying-in, might be susceptible of the disease. Cases occurring under these different circumstances have happened within his own knowledge. He is apprehensive that the contagion may be conveyed by persons much engaged in hospital duty, at a time when its atmosphere is heavily loaded with this peculiar effluvium.† The remaining Queries and Answers are not particularly interesting or conclusive; we shall, therefore, pass them over, in order to take some notice of the appended “Observations.”

* “By the term casual case of puerperal fever, I mean such as occasionally occurs, both in hospital and private practice, when the disease is not epidemic, and which is excited by accidental causes, either during labour, or subsequently to delivery. In these cases, I presume the local inflammation more frequently to be primary, and the pyrexia to be consequential; whereas, in the epidemical, I consider the pyrexia to be primary, and the local affection to be consequential.”

† He has generally perceived by the sense of smell, the effluvia of puerperal fever, when epidemic, on entering the wards.

Our author proposes to divide puerperal fever into three species, viz.—

Synochal puerperal fever,

Gastro-bilious puerperal fever,

Epidemical or contagious puerperal fever.

“The cases that I rank under the first distinction are all those attended with pyrexia, similar to that of any other purely inflammatory disease. These are neither produced by contagion, nor are they themselves infectious. They are usually the result either of tedious or ill-managed labour, or of exposure to cold or other adventitious cause, after delivery.

“This form of the disease is to be subdued by copious blood-letting, and other sedative and evacuant remedies, viz. antimonials, purgatives, enemata, fomentations, &c. The abstraction of blood, however, should here be considered our sheet-anchor: this fluid must not only be early and copiously taken, but the operation should be repeated in proportion as the pulse or abdominal pain may afterwards indicate. The pulse, I may remark, is often in this, as in every variety of abdominal inflammation, deceitful. I therefore regard the degree of pain felt on pressure, as a preferable criterion, by which to regulate the abstraction of blood; and I cannot refrain from stating it to be my opinion, that the reason of this inestimable remedy having so frequently failed of the desired effect, and having been, by some, condemned as useless or even injurious in this and other diseases, is not owing to genuine inaptitude in the remedy, but to the inefficient manner in which it is often applied by timid practitioners.” 153.

Under the second species our author includes those cases wherein the disease does not so rapidly assume a decidedly inflammatory character—where the fever does not, as in the former case, commence with a bounding, incompressible pulse; “but with a pulse frequent, hard, and concentrated; neither are the symptoms of abdominal inflammation so early evolved.” Yet such inflammation, our author ob-

serves, does exist, and progresses, when not checked, although more slowly and more obscurely than in the former species. The tongue is here loaded as in common bilious fever; "whilst in the former it is usually white, or cleanly florid, with sometimes a glazed appearance."

"The treatment here should likewise commence with blood-letting, but in more moderate quantity; immediately after which ten or twelve grains of calomel should be administered, and followed in a few hours by an ounce of castor oil combined with some other briskly purgative medicine. These medicines, unless given in large doses, will produce but little effect, in this complaint; and it is of paramount importance that the mucous surface of the intestinal canal should be effectually acted upon early in the disease in all cases, and more particularly whilst the morbid action of the peritoneal covering is under a kind of panic from the blood-letting, and before that inflammatory action can re-organize its broken force. Often, by such prompt treatment, will the disease be arrested *in limine*; should it however advance, whether in increased or subdued violence, purgative medicines, varying in kind, must be daily administered, assisted by enemata, fomentations, topical blood-letting, &c." 154.

That form which our author arranges under the third head, he considers to be "the really contagious or epidemical puerperal fever; and although agreeing with the others in the great leading symptoms, inflammation, pain, tumefaction and tension of the abdomen, yet differing from them in many material characters."

"The sensorium here is seldom in any degree disturbed; whereas in the others it is so, frequently, and even sometimes is excited to high delirium. The pulse here is usually from the moment of attack, soft, weak and yielding, and in quickness often exceeds 160, whereas in the first species it is full, bounding, and incompressible; and in the second, small, hard, and concentrated, and in both moderately quick. The eye, instead of being suffused with a reddish or yellow

tint, as in the others, is here generally pellucid, with dilated pupil. The countenance, instead of being flushed as in the others, is here pale and shrunk, with an indescribable expression of anxiety; an expression altogether so peculiar that the disease could on many occasions, be pronounced or inferred from the countenance alone. The surface of the body, instead of being as in the others, dry and of high pyrexial heat, is here usually soft and clammy, and of heat not above the natural temperature, and not only is the skin cool with clammy exudation, but the muscles to the impression of the finger, feel soft and flaccid as if deprived of their *vis insita*, by the influence of the contagion. Indeed there is such prostration of muscular strength, and depression of vital principle, from the very onset of the attack, that I must suppose the contagion to act upon the human frame, probably through the medium of the nervous system, in a manner analogous to that of the contagion of the plague; and perhaps the African plague does not commit greater havoc among an equal number of infected persons than puerperal fever in this country; nor is puerperal fever less quickly fatal than the plague itself." 156.

It appears to us that this form of fever does not agree with the general descriptions of epidemic fevers in other times and places, as given by various authors. We must therefore suppose, what indeed is very probable, that the epidemic of Dublin differed in character from the epidemic of Edinburgh and other places, thus requiring a modification of treatment. It will not fail to strike the notice of our readers that the above extract conveys a tolerable idea of what has been described in this country as the *congestive* form of puerperal fever—a form by no means common in the epidemics of this country and Scotland. We suppose the climate and habits of the Irish must be the *principal* modifying causes. The mode of treatment recommended by Dr. Douglas we shall give in his own words.

“Without pretending to detail any of the various modes of treatment, which I may have seen pursued either success-

fully or otherwise, I would here recommend the practitioner to commence by administering ten grains of calomel, combined with two grains of powdered opium, in the form of bolus, or of pills ; likewise, as early as possible, a briskly purgative enema. After the operation of the enema a number of leeches, from two to four dozen, according to circumstances, should be applied to the abdomen, and the abdomen should afterwards be stuped with flannel cloths, wrung from warm water ; and not only at this period, but frequently through the whole course of the disease, should such fomentations be used. Three or four hours having elapsed from the time of administering the calomel and opium, three drachms of pure oil of turpentine, with three drachms of syrup and six drachms of water, in the form of a draught, should be swallowed ; and, after the lapse of another hour, this is to be followed by an ounce of castor oil, or some other briskly purgative medicine. In some instances, the oil of turpentine and castor oil may be combined in one draught ; but I generally prefer giving the turpentine as here recommended. Some of these remedies, occasionally assisted by others suitable to the peculiarities of the case, are to be repeated as circumstances may indicate ; but I would not be disposed to repeat the internal use of turpentine oftener than twice, in any case whatever. In several cases, particularly where the debility is very considerable, the blood-letting may be altogether omitted, and in these cases a flannel-cloth, sopped in oil of turpentine, should be applied to the abdomen, and allowed to remain on for the space of about fifteen minutes. This external application of turpentine, without either its internal use or the aid of blood-letting, I have frequently experienced to be entirely efficacious in curing puerperal attacks ; and although I have hitherto omitted to speak of turpentine for the cure of the other varieties of this disease, yet I would not feel as if I were doing justice to the community, if I did not distinctly state that I consider it, *when judiciously administered*, more generally suitable, and more effectually remedial, than any

other medicine yet proposed. I can safely aver I have seen women recover, apparently by its influence, from almost hopeless conditions ; *certainly* after every hope of recovery, under ordinary treatment, had been relinquished." 157.

Our author does not pretend to account for the *modus operandi* of the oil of turpentine in these cases. He thinks that where it acts as a purgative, there are rational and philosophic grounds for concluding that the medicine excites powerfully the whole mucous membrane of the intestines, and thus derives the morbid irritation from the peritoneal tunic to a secreting surface, where it is carried off by the increase of secretion itself. But, on the other hand, he has known the turpentine in several instances, even by its external application, relieve the most urgent symptoms of this formidable disease in the course of fifteen or twenty minutes, without producing any sensible evacuation. We do not think that this fact is at all inexplicable on the above-mentioned principle of counter-irritation. If the irritation can be transferred to the external surface of the body, it is still better than to the internal. Our author regrets the discrepancies of opinion respecting this medicine, which are scattered in our periodical works. His own conviction is, that the epidemic puerperal fever of lying-in hospitals, is "neither more nor less than a malignant fever of a typhoid character, accompanied with an *erysipelatous inflammation* of the peritoneal covering of the stomach, intestines, and other abdominal viscera." We have heard this remark made by some very old practitioners in this metropolis; but on pressing them for particulars, we found they could shew us no satisfactory proofs of this erysipelatous inflammation as differing from the usual phlogosis of the serous membranes in general. Their dissections exhibited reddening of the membrane—adhesions,—and sero-purulent effusion. If Dr. Douglas's dissections disclosed any anatomical proofs of an inflammation differing in these respects, he certainly should have stated them; and till then, we shall beg leave to withhold our assent from this assumed divi-

sion into phlegmonous and erysipelatous inflammation of the peritoneum. By this we do not mean to assert that all cases of puerperal peritonitis will bear vigorous depletion; we have all along expressed our conviction that there are epidemics, where the accompanying fever is of that kind that will not bear depletion as in the sporadic attacks. We agree with our author in the concluding passage of his paper.

“It must, however, be distinctly understood, that I here allude to the type of the pyrexia of epidemic fevers in Lying-in Hospitals. For I am led to believe, when puerperal fever happens to be epidemic at large, in towns or districts, that its pyrexia is rather of the synochal character, and requires for its subjugation the bold and decisive depletions, recommended in Dr. Armstrong’s invaluable treatise on this subject.” 160.

Upon the whole, we think our professional brethren will be disposed to return thanks to Dr. Douglas for portraying the results of his experience on the important topics discussed in the above paper.

The next paper in this volume is a—

III.

Medical Report, containing an Inquiry into the Causes and Character of the Diseases of the Lower Orders of Dublin.
By T. C. SPEER, M. D. M. R. I. A. late Physician to the Dublin General Dispensary.

MAN is a component part of the earth under his feet and of the elements around him—to which is added a vital principle or organization that leaves him in a condition to be influenced by, but not entirely subject to, the laws of the circumambient unorganized matter. We have no doubt, indeed, that national character, as well as form and other material properties, depends as much on climate and physical circumstances, as on government, laws, religion, and education. Philosophers have attributed too little to the former, and too much to the latter agents. Our author

thinks, and not without reason, that Ireland furnishes an illustration of this proposition.

"Irish character, like Irish climate, is full of peculiarities, and without being fanciful, I think we may trace a congeniality between them; like the climate, it abounds in vicissitudes, varieties, and extremes; between the bright and dark, little medium is observed. It is to the lower orders, of course, that this observation chiefly applies; with them civilization seems chiefly made up of two of the materials above mentioned,* viz. education and amenability to the laws. Now these are the points in which our lower orders, as compared with those of our neighbours, seem particularly backward; two, therefore, out of the four moral causes being more or less withdrawn, the influence of natural causes, such as climate, must, with us, be infinitely greater."

164.

While remarking on the diseases of the lower classes, our author makes some keen reflections on the advantages and disadvantages (to the medical practitioner) of Dispensary practice. As this practice is now pretty generally monopolized by our junior brethren, we shall give Dr. Speer's sentiments on the subject, in hopes that they may profit by his observations.

"The practice of a general Dispensary is perhaps the most complete introduction to the diseases, and indeed to the distresses, habits, and character of the lower orders of a city. Sorrows and sufferings are here unveiled, which shame will hide from the public eye; here we shall see how the chain of poverty has its various links, and the cup of bitterness its various dregs; here we become associated with disease in all its varied and complicated shapes, and here we are most promptly and powerfully called on to combat it with the rules of our art.

"Dispensary practice has its advantages and disadvantages pretty equally mixed; it creates promptitude; it affords

* Government, laws, religion, and education.

a wide range of insight into local peculiarities ; it opens an immense and diversified page, not only in the book of medicine, but of mankind ; it breaks away the fancies of the closet, and the bondage of the schools, and gives confidence and courage at the bed-side of a patient. On the other hand it has its disadvantages ; it creates a coarseness of practice ; we know we are dealing with raw and uncertain materials, and we find the most common plans of treatment often answer the best ; by these habits our thinking and theorizing powers are weakened and hurt ; we cannot gain very much as to the effects of our medicines, because we know these effects may be and are counteracted by improper diet and regimen. We cannot, as in Hospital practice, restrict our patients to certain rules and laws, nor confide them to nurses or even friends who can be relied upon. We reason, therefore, much less on the *modus operandi* of our medicines, and thus an unfair spirit of distrust and empiricism may be generated." 167.

There is another inconvenience attending dispensary practice among our younger brethren, far greater than those delineated by Dr. Speer. It is this :—diseases, when caused or accompanied by want, the depressing passions, filth, and unwholesome food, are greatly modified thereby, and vary much from diseases of a similar kind among the higher classes of society, where, in fact, the circumstances are diametrically opposite. The young practitioner, therefore, who has not a proper balance of practice among the different classes, must necessarily form erroneous opinions and contract partial views of diseases, upon several occasions. Still the Dispensary is the very best school *he* can have ; and time will correct the imperfections from which no institution is free.

The causes which lead to the formation of disease in the lower orders of the Dublin population, our author classes under the heads of climate, poverty, population, and national character.

1. *Climate.* The thermometric range is not near so great in Dublin as in England or Paris. The summer heat seldom exceeds 75° , and in winter the thermometer is rarely below 25° . But *within* the above range, the vicissitudes are more sudden in Dublin than in the other capitals. "Even in the twenty-four hours, variations will amount to 20, 25 or 30 degrees, so that we have often seasons of the day as well as seasons of the year." But though very fickle in its temperature, the atmosphere of Dublin is pretty regular in its currents of air. The westerly and southwesterly are the great trade or reigning winds, and are to all the others put together as three to one. Next to variability of temperature, humidity seems the most characteristic feature in the Irish climate, not only as indicated by the rain gauge, but also by the hygrometer.

"Such seem to be the chief peculiarities of our climate, and we may, I believe, as compared with that of England, say, in general, that it is more free from extremes in temperature, but more variable, humid, and cloudy; that our seasons are less distinctly divided, our springs more cold and severe, our summers more wet and temperate, our autumns more alike each other, and our winters much milder. Speaking without comparison, it appears from various and numerous observations, that spring is our severest season, summer our wettest, autumn our dryest and warmest, and that our winters are, except towards the close, generally mild and open." 175.

It is in the order of phlegmasiæ that we must chiefly look for the effects of the climate above described. The sanguineous system is the one principally affected—and inflammation characterises the diseases. These sudden changes of temperature acting on an unprotected, ill-fed, ill-clad population, produce more or less sudden determinations to particular organs, and proportionally derange the balance of the circulation.

"How far humidity, unaccompanied with severe cold or heat, contributes to the production of disease or health, is

as yet a point not clearly settled ; the latter would with us seem rather to be the case. Dr. Ratty thought our moist seasons the healthiest, at least much freer from epidemics, and his various observations go decidedly to confirm this opinion ; this has also been the opinion of other observers since his time, who think that, unless with great variations of temperature, severe cold, and easterly winds, our humid seasons are in general our healthiest. A single proof of this seems to have been furnished in the year 1816, which was remarkably healthy and remarkably wet. Dr. Franklin, and Dr. Percival of Manchester, conceived that moist seasons are healthier than dry ones, *ceteris paribus* ; and Sir John Pringle seems to have been of a similar opinion. It is only therefore in its combination with extremes and varieties of temperature, &c. that we can consider humidity in its promotion of disease, and even here we know not how far to go." 177.

Spring is the grand season in Ireland for pulmonic affections. But notwithstanding the great humidity and changeableness of the sister climate, scrofula, at least in its usual forms of development, is a rare disease comparatively with England and Scotland—and even pulmonary phthisis is far less common in Ireland than in these climates, notwithstanding the ravages of pulmonic inflammation in the former island. This fact would strengthen the doctrine of Dr. Baron and some others, that the development of tubercles in the lungs is not strictly an inflammatory process, though the said development does undoubtedly occasion inflammatory action in the neighbouring parenchymatous structure of the lungs.

2. *Poverty*. This is a fertile cause of disease, especially in Ireland. Potatoes, salt fish, and tea are the principal articles of Irish diet among the lower classes. Flesh meat can seldom be procured, and of fish, herrings are the favourite species—probably from their cheapness and stimulating or savoury quality.

"It is impossible not to notice the preference which the

lower orders here, compared with those of England, have to *stimulating* or *flavourous*, rather than *nourishing* food, and indeed their carelessness about the latter except potatoes. This may be partly explained from their national character, as will hereafter be mentioned. In the diet of the lower orders in England, nourishment is the grand object, and the rules of their diet are conducted with a system and an arrangement completely unknown here. With us what excites is the chief consideration, and as to regularity in meals the poor are very indifferent about it. With the former the *stomach* is the presiding organ; it seems to hold dominion over all the others, and to be a complete tyrant. With us the *nerves* appear to hold this place, and to these a great deal is sacrificed. It is impossible not to notice, with the lower orders in England, when ill, that their great and first complaint is 'they can't eat;' here the general complaint is, that 'they have a fluttering or oppression about the heart.' ” 181.

It is curious that notwithstanding this poverty of food and carelessness of the Irish, the lower orders are capable of labour and fatigue equal, if not superior to their brethren of England or Scotland—in short, Nature seems to have gifted them with hardy and vigorous constitutions.

“Under the head of diet, *Tea* seems to hold the highest rank with our poor; unlike its more dangerous rival, whiskey, its draughts, though impoverishing, are not delirious; if it drowns sorrow, it does not drown sense; if it gilds the gloom of poverty, is not the delusion a blessing? It seems, indeed, the general panacea, always affording comfort, calmness and consolation; constituting not only the leading article of breakfast and supper, but often of dinner, and over its placid inspirations their happiest hours seem to be passed.” 183.

Unfortunately the effects of the other favourite beverage (whiskey) are of a different complexion. The great estimation, our author thinks, in which fermented liquors are held by all northern nations, is a sure proof of their neces-

sity and value. Among the inhabitants of Hyperborean lands there is a perpetual struggle, Dr. S. observes, between the laws of life *within*, and the laws of nature *without*; and whatever gives a preponderance to the *former* will be eagerly sought after. As we approach the Pole we observe the propensity to spirituous liquors increase. Here life is at a low ebb, artificial excitement becomes indispensable, and the means of procuring it are among the chief objects of the people.

“That the *use* of this fluid with us is attended with great advantages is unquestionable, but that its *abuse* has completely thrown these advantages into discredit, is equally so. Indeed in the entire mass of misery of our poor, whiskey is thought to form the principal remedy; they conceive it a cure for all complaints, and all weathers; in warm weather it allays their thirst; when cold, it heats them; when wet, it dries them; in sorrow they fly to it as a charm and a blessing, and in its intoxicating draughts their misery is forgotten. The bad effects, however, resulting from this fluid with us are not, I think, to be ascribed to the quantity consumed. I believe the lower orders in Manchester, Edinburgh, Glasgow, and some of the large manufacturing towns in Great Britain, consume a greater quantity; but there is a striking difference in the mode of consumption between the two—they do not take it on empty stomachs like our people; they eat much more solid nourishing food; thus the effects of the whiskey are less directed to the coats and nerves of the stomach, or to the brain, and therefore intoxication does not exhibit itself so frequently. However, the great proportion of public houses in Dublin compared with others, is a clear proof of the immense consumption of whiskey, and until such is reduced, disease and distress must stalk abroad through our streets.” 184.

Our author has observed dropsical affections to constitute a most predominant feature among the diseases of the lower Irish—especially among females. This might be expected from the general indulgence in weak, watery and intoxicat-

ing fluids, indolence, poverty, &c. Their attachment to salt and salt food is constant. Salt herrings and potatoes is the standing diet.

Our author has found constipation of the bowels a remarkable and almost universal phenomena among the class in question, whether in sickness or health, and consequently he has found no remedy so directly and almost invariably useful as purgatives. He believes that Dr. Hamilton has not in the least exaggerated their powers. Next to the alimentary canal the skin seems to be principal sufferer from the effects of salt food. Cutaneous affections and obstructed perspiration are very prevalent. From the diet and drink we need not wonder at finding a large proportion of nervous affections, as low nervous fevers, dyspepsia, hypochondriasis, asthma, &c. But the liver and stomach bear the chief onus of disease. Hepatic derangements are far more prevalent among the inhabitants of Dublin than of London or Edinburgh, owing, no doubt, to the ingurgitation of ardent spirits on an empty stomach. "The dissections at the various hospitals, says our author, exhibit greater derangement of this organ (the liver) than almost any other." He has seen it assume various forms of disordered structure, and he has always observed it to be the most prolific parent of disease. "Inflammations, indurations, adhesions, and tubercles are the general appearances it presents, and I believe it is rarely free from some one of these." In the stomach are found inflammation, thickening of the coats, induration, scirrhus, &c.

3. *Population.* On the 30th of October, 1821, a census of the population of Dublin was completed, and found to be 238,201 souls. This exuberant population, combined with the decline of trade and manufactures, the early and imprudent marriages of the Irish, &c. furnishes an abundant source of disease among the inferior classes. The effects of a dense population are particularly conspicuous during epidemics. In the crowded quarters of the city the atmosphere, both in and out of doors, becomes highly vitiated, ventila-

tion is suppressed, the windows are hermetically sealed, and crowds of human beings are constantly exchanging the exhalations of each others' lungs, and thus diffusing contagion in every shape and direction. The last subject touched upon by our author is—

4. *National Character.* Even this is by no means unconnected with health and disease. The following passage exhibits the bright or moral side of the Irish character among the lower orders of society.

"*Passion* seems to be the grand and presiding feature in the national character of these people: from this all its peculiarities emanate, and whatever it has of faults or beauties are here to be found; it is their constant guide, and regulates most of their actions. Their principle of *thinking* being so subordinate to that of *feeling*, and their principle of *feeling* being subject to such rapid changes and vicissitudes, we see about them that freedom, lightness, and carelessness, which makes them happy even in their miseries, because unmindful of them. Sorrow cannot rest upon them long at a time; their constitution is elastic, and soon shakes it off. There is a strong love of life about them, and a love of each other; and although distress and sufferings press in every shape around them, yet this love seems proportionally to increase in the strength of its instinct, and to cling more closely to them: that tedium vitæ, often so conspicuous among our neighbours, is here but rarely observed; suicide is almost unknown, and let their sufferings and privations be ever so crowded on each other, they rise superior to them, or bow with resignation. Universally good natured, careless, warm in heart, hospitable, grateful, and fond of each other; full of words, exaggerations and professions, they ever look at the bright side of life; hope is their companion, and seldom deserts them." 195.

But from this character, amiable as it is in many respects, spring great sources of suffering and degradation. They all hold the doctrine of fatalism, believing that their own exer-

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tions are of very little use, and that whatever happens is from inevitable destiny, to which they bow with placid resignation. Hence the total neglect and abandonment which marks every thing about them. Indolent, prodigal, and careless, they look not beyond the wants of to-day, contented if they can satisfy the common cravings of nature. Indolence and dirt, the result of this character of the lower Irish, are the principal agents in the production of their diseases.

“ Under the head of want of cleanliness, with reference to individual health, we have chiefly to regard the condition of the skin. This acquires a complete coating, its exhalants are obstructed, perspiration is prevented and vitiated, and thus one great outlet for the discharge of impurities is closed ; the proper healthy balance of circulation is destroyed, the internal organs are oppressed, and the whole machine deranged : thus we cannot wonder that cutaneous affections should form so large a proportion of disease with the Irish poor.” 198.

Under these circumstances we cannot wonder at the rapid diffusion of contagion when once introduced or generated among such a dense population. Within doors every article of furniture and wearing apparel is disfigured with filth—every spot encrusted with its layers ; and the foulest odours every where abound. Out of doors, especially in warm seasons, the church-yards, slaughter-houses and masses of filth and offal in the narrow streets and lanes contribute no less to the propagation of contagion. In some of his visits among the narrow and crowded streets, Dr. Speer has been obliged to wade through masses of filth enough to sicken the stoutest heart—masses that must have remained there for months, perhaps for years generating the most putrid effluvia ! This far exceeds any thing we see in St. Giles’s ! and we hope the police of Dublin will soon remove such a disgrace and danger from the sister metropolis.

The study of medical topography, and of the public sources of health and disease, is a very important and use-

ful study : and it was with the view of exciting our junior brethren to it that we have entered so largely into the paper just now concluded. Dr. Speer is entitled to the thanks of the profession, and of his fellow citizens in particular, for pointing out so many public and private nuisances, many of which are remediable or removable by proper interference.

IV.

Fatal Consequences resulting from slight Wounds received in Dissection. By A. COLLES, M. D.

A YEAR never passes, now-a-days, without proving fatal to several of our brethren in the above way. This used to be a comparatively rare occurrence, as dissection was pretty closely confined to the dissecting room ; but now there is scarcely a general practitioner who is not in the habit of making pathological researches whenever opportunity occurs, which is often the case, owing to the decrease of prejudice among all classes of society.

It is somewhat curious that, of the three histories given by Dr. Colles, under the head of "fatal consequences," &c. two terminated favourably—which reminds us of the Hibernian's propensity to cry out that he is "*murdered*," when he is only knocked down. It must be confessed, however, that of the two gentlemen who recovered, one was almost in the grave, and the other appears to have had a very narrow escape.

The operation of the septic principle received during dissection, varies very much in different individuals, so that we do not think any thing like a history of the complaint can be given. In the two worst cases here narrated, there was considerable resemblance, not only to one another, but to the case of the late Dr. Pett, of Hackney. We shall first give a sketch of the cases themselves.

Case 1. Mr. Hutchinson, one of Dr. Colles' pupils, received a slight scratch while opening the body of a man who

had died of cynanche laryngea. The cellular membrane on the external surface of the larynx and pharynx of the deceased contained that amber-coloured fluid resembling melted jelly, which is so often met with in such as have been carried off by this disease. The scratch on the thumb was very slight, yet the gentleman was that evening drowsy, and awoke next morning with head-ache, sickness of stomach, and acute pain in the shoulder and axilla of that side. On the third morning, the pain had increased to an extraordinary degree, and was still confined to the shoulder-joint, but without any discolouration of the integuments. There were no inflamed lymphatics on the arm, or enlargement of the axillary glands. Yet he suffered exquisite pains about the clavicle and axilla, on the slightest pressure being used. The scratch on the finger at this time was quite free from inflammation, but the cuticle was raised in a small vesicle, partially filled with a white milky fluid. In this state he continued for three or four days, in agonizing pain, violent fever, and great mental despondency. Fomentations, leeches, opiates, afforded no relief. At length, some mitigation of the pain took place, and a diffused erysipelatose redness spread along the thorax and abdomen, down near to the ilium, and ultimately to the trochanter. The skin had a doughy feel, and retained the impression of the finger. The fever continued unabated, and the strength was nearly exhausted, being only supported by large quantities of wine. Incisions were made over the fourth and fifth ribs, with the hope of finding some collection in the cellular membrane, but none was discovered. In a few days more, the inflammation ceased to extend, the cuticle began to desquamate, and the pain to diminish. At the end of three weeks from the accident, the pain had nearly subsided, and his general health was improving; but in a day or two, pain and swelling appeared in the arm, and soon became almost insupportable. Some matter formed, and was discharged by an incision. The inflammation, also, re-appeared in the side, and ended in a small abscess.

After this, the patient rapidly recovered, and went into the country.

“ From the commencement of the disease his spirits were sunk ; he frequently raved ; his pulse throughout was never less than 120, and sometimes it was 130. His stomach was, at the commencement, very irritable, and got better ; but it again became alarmingly irritable about the beginning of January. This might have been partly caused by the large quantity of opium he used, for he could not procure any relief, except by a large dose, amounting to a drachm, or four scruples of the tincture daily.” 207.

Case 2. The second case was that of Mr. Dease, the late lamented and estimable Professor of Anatomy and Surgery to the Royal College of Surgeons of Dublin. On Saturday, the 13th of February, 1819, he lectured on the cervical nerves, the subject being a female, not more than 48 hours dead. On Sunday morning early, he awoke with a violent shivering and sickness at stomach, which lasted two hours. At eleven o'clock, he earnestly besought Dr. Colles to bleed him for a pain in his left shoulder, which was most excruciating. Dr. C. declined bleeding him till three o'clock, when, urged again, he took away nearly twenty ounces of blood from his arm by a large orifice. He experienced partial relief at the beginning of the bleeding ; but at nine there was no essential mitigation of his sufferings. The fever was as high as ever. The blood was neither bled nor cupped. Dr. C. now observed a slight fulness above the clavicle, and on pressing it with his thumb, the pain became exquisite. On Monday the 15th at eight o'clock in the morning, Dr. Colles visited Mr. Dease, and found that he had had a bad night, owing to the pain in the shoulder, on which he had now nearly one hundred leeches. In a consultation, some aperient medicine was ordered, which operated but little, and did not reduce a fulness of the abdomen, which was now conspicuous. 16th of February, the bowels had been more satisfactorily relieved, but, with little diminution of the general symptoms. He was advis-

ed to continue the use of purgatives. In the evening of this day a colourless swelling was discovered on the side of the thorax, and this, for the first time, led to the suspicion of a dissection wound, of which Mr. Dease had no recollection. Dr. Colles discovered on the dorsum of the thumb, the mark of a slight scratch which formed the diameter of a vesicle half filled with a milky fluid. The pain in the shoulder was now easier, and he could better bear pressure about the clavicle. Every evening, about six o'clock, he had an exacerbation of restlessness and depression of spirits. 17th. A bolus of calomel, with a liquid purgative draught. 18th. The medicine had operated well, and he slept four hours after taking the draught, awaking cheerful and refreshed. To have an anodyne draught at bed time. 19th. Passed a bad night, and has some delirium this morning—face has a yellow tinge—countenance sharp—pulse small. The incision where he had been bled, was inflamed in the ordinary way, and there was a small vesicle on the fore-arm, two inches below the incision, containing a milky fluid. 20th. His manner was quick this morning, and bordering on delirium—pulse 126 and smaller—the entire side, from the axilla to the hip, swelled, and studded with small elevations, appearing like vesicles, but feeling hard to the touch. There was a strong erysipelatous blush occupying a small portion in the middle of the swelled side—tongue white; abdomen full. 21st. There appeared to be an abscess, but without distinct fluctuation, near the axilla; and there was a tumour on the anterior part of the right arm, which they agreed to puncture, though the patient was fast approaching to dissolution. A small quantity of serous fluid escaped, but did not reduce the swelling. He died at ten o'clock that night. There was no dissection of the body—nor indeed could it have been of any use.

The third case is only an outline. Mr. Egan had employed himself in dissecting the body on which Mr. Dease had lectured, and on the same day, viz. Saturday, 13th of February. On Sunday evening he had a rigor followed by

a febrile paroxysm. On Monday, though not well, he went into company. On Tuesday he had a hoarseness, and inflammation attacked the thumb, with pain and erysipelatous redness around it, the pains passing up along the back of the fore-arm, attended with a smart degree of fever. On Friday he complained of tenderness under the border of the pectoral muscle, where an enlarged gland could be felt. His chest appeared to be seriously affected. On Sunday, the 28th of February, Dr. Colles saw him—fever running very high—pulmonary affection and distress very great. The abscess near the axilla was now opened and discharged some purulent matter, the cavity proving to be extensive, passing across the pectoral to the latissimus dorsi muscle. He gradually recovered.*

* We copy the following account of Dr. Pett's case from our respected contemporary, the Medical and Physical Journal for February of the present year, as communicated by Mr. Travers.

"At eight o'clock on the morning of Saturday, the 28th of December, Dr. Pett assisted a medical friend in examining the body of a lady who died of peritoneal inflammation after child-birth, on the Thursday preceding. At nine o'clock the same evening, being in his usual health and spirits, and while engaged at cards, he complained of an uneasiness in the middle finger of his right hand. On minute examination, a slight superficial wound was discovered. It was then touched with lunar caustic, and some time afterwards with a drop of strong sulphuric acid, neither of which applications was felt. On going to rest, he again applied the lunar caustic to the wound for the space of half a minute, which application was followed by pain, soon increasing to intensity; and, an hour after he had been in bed, he was attacked by a severe rigor, which continued more or less for three hours. The pain spread from the finger along the arm to the axilla, and was so agonizing as to lead him to observe, that he had never before known what pain was. The night he described as one of dreadful suffering, without intermission. In the morning, the expression of his countenance, and the altered manner of the man, struck his medical friend with instant alarm. The finger was white, and without sensation.

"At twelve o'clock on Sunday, an incision was carried through the wound to the bone, which was not felt by Dr. Pett. In the course of this day, the arm became swollen, and the superficial absorbents conspicuous from inflammation. The pain affecting the arm extended to the axilla and pectoral region. The finger in a few hours became discoloured and gangrenous as far as the second joint, where suppuration of the soft parts af-

Dr. Colles has made some reflections on these cases, which he thinks present us "with the character of a disease both formidable and new."

"The severe pain felt on the point of the shoulder; the peculiar colourless swelling, or fulness above the clavicle, within a few hours after the infliction of the wound; the wound itself at this time free from inflammation or pain; no red streaks, no pain, nor even tenderness on pressure through the whole course of the limb. In short, no trace at the time of any morbid connexion between the wound and the seat of the pain, were the most remarkable features of this disease." 217.

Another remarkable phenomenon was the peculiar appearance of the pustules, (unlike to any he had ever witnessed) particularly the pustule on the fore-arm of Mr. Dease, which could not have been from the wound made by the lancet, as this pustule was *below* the incision, the interven-

terwards took place. The high excitement of the nervous system, marked by a flushed countenance, a ferrety eye, vigilance, great anxiety, short and quick respiration, rapid and voluble speech, and unnaturally irritable manner, were accompanied by a very moderate acceleration of the pulse, which soon became intermittent, and then irregular.

"On the morning of Tuesday, the arm had recovered its natural appearance; it was neither swollen nor painful, nor were any absorbent lines visible. A considerable effusion had taken place in the cellular substance of the axilla, and over the pectoral muscle: it was marked by an erythematous blush, was painful, and crepitated on pressure as in emphysema. The symptoms varied but little; but increased difficulty and hurry of respiration, and increased feebleness, were marked at each visit. He expressed a sense of confusion; but there was no further evidence of disturbed intellect than the deviation before adverted to from his natural characteristic calmness. The fulness at the axillary edge of the pectoral muscle being sensibly increased on the Wednesday morning, a lancet was pushed deeply into it, but only a bloody serum issued.

"On the Wednesday evening, about six o'clock, he died, having survived the injury about 105 hours. The body was inspected on Friday, and no recent morbid appearance whatever was discovered in the chest or abdomen. The heart was unusually large, and its substance flabby. The internal structure of the liver had undergone considerable chronic degeneration. The head was not examined." 177.

ing skin between it and the pustule being natural. The resemblance of these elevations to vesications, while to the touch they felt solid, was another peculiarity. Our author cannot agree that the swelling on the side of the chest, in these cases, was of an erysipelatous nature, as the redness was of a bright healthy colour, and did not occupy more than a sixth part of the swelling.

Dr. C. observes that, however we may dispose of the disease, in a nosological way, it is obvious that neither habits of dissection the most lengthened, nor a state of dead body the most free from putrefaction, can secure the anatomist from the danger of this formidable disease. Mr. Dease had been in the habit of dissection for more than twenty years. In Dr. Colles's recollection he found most of the instances of inflammation and fever following wounds received in dissection, among those pupils who had arrived at the third season of their anatomical pursuits. We are disposed to think Dr. Colles is not correct in supposing that it is a generally received opinion among the profession, "that the danger from wounds in dissection is in proportion to the putrefaction of the subject, or to the contagious nature of the disease which had caused death." The best informed anatomists of this country do not entertain such an opinion, their experience coinciding with that of our author as expressed in the follow passage.

"On the contrary, according to my observation, unpleasant consequences have been so rare, where the subject was far advanced in putrefaction, as to induce me to think that putrefaction rather gives protection to the anatomist: nor could I trace any connexion between the disorder in question, and the contagious nature of the disease which had destroyed the subject of dissection, and surely during the winters of 1818-9, when fever raged so extensively in Dublin, we should have had some striking instances of such a connexion had it existed. Perhaps the majority of the affections in question have occurred in cases of examination of

bodies to ascertain the cause of death, and where the body had not even been interred." 219.

Dr. Colles has never witnessed any of those dangerous constitutional affections which are mentioned by some authors as attending the dissection of bodies in a state of putrefaction. In respect to the question whether we are to attribute these accidents to a poison or septic principle inoculated, or merely to the puncture itself, in a peculiar state of the constitution—we would be disposed to answer, in the absence of demonstrable proof, that there is great reason to suppose some poisonous matter introduced—the effects of this being modified by the state of the constitution at the time. The consequences of mere punctures by common instruments, in the various avocations of life, are very trivial, and, when they do become serious, are of a very different class from those following dissection wounds. We allude to the tenanic affections occasionally following slight wounds, especially in tropical climates.

As our author cannot offer any thing consolatory in the way of treatment, it is the more incumbent on anatomists, he reasonably thinks, to attend to the means of prevention.

"The advantages of the immediate application to such wounds of caustics in a solid or liquid form, is too obvious to require any comment; they are the only means upon which we can rely with absolute certainty.

"But those who are acquainted with the zeal of anatomists must doubt whether any practice which interferes with the prosecution of their pursuits will be generally adopted; the pain and the delay which must be occasioned by applying caustic to every little scratch, will prevent this plan from being as generally followed as it should be, or as the safety of individuals require.

"I would therefore recommend that each dissecting table be furnished with a cup of *oleum terebinthinæ*, into which the anatomist should plunge his finger the moment it is wounded. The smart which this produces is so inconsiderable, that it will not cause any serious delay, while the irri-

tation may counteract the power of infection, or alter the mode of inflammation in the wound." 222.

We may be permitted to remark that, for many years past, the precept and example of Professor Chaussier have been adopted in the anatomical schools of Paris. Each student keeps in his pocket a small phial of the liquid butter of antimony (muriate of antimony) and whenever he wounds himself, in dissection, plunges the point of a little wooden pencil into the caustic, and quickly cauterizes the puncture or wound. We, ourselves, would recommend the strong nitric acid, where the wound is tortuous, or made with a sharp pointed instrument, as this liquid immediately penetrates every part of the puncture, and completely disorganizes its parietes, thereby rendering them incapable of taking up any part of the septic principle. When, unfortunately, the poison has taken effect, we know of no *specific* means of checking its progress, and therefore we are obliged to combat the symptoms on general principles, for which no rule can be laid down. When we reflect that the inflammation produced by these punctures is of a specific kind, and attended with a peculiar constitutional derangement, we much doubt the propriety of that active system of depletion which is so effectual in common phlogosis and acute inflammatory diseases.

We shall review the other papers contained in this volume in our next number.

ANALECTA.

Malformation in a Male Infant.

Mr. ASHFORD, of Hinckley, has favoured us with the following case :—Mrs. Holtham, of that place, was delivered, in June last, of twins : the first child, a female, was born perfect : the second, a male, lived about six weeks. It was observed that the umbilicus was but a short distance above the pubes, immediately under which, upon the abdominal surface, terminated the ureters. The vesica urinaria was wanting ; the glans penis was exposed, and resembled a cone flattened on one side ; there was no appearance of urethra. The testicles were situated on each side, just behind Poupart's ligament, and were in themselves seemingly perfect.—(*London Med. and Phys. Journal*, August.)

Extraction of the Skeleton of a Fœtus.

The case of Elizabeth Aterwell, mentioned in a late number of this Journal, is now nearly brought to a successful termination. Mr. GUNNING has extracted the whole of the skeleton of the fœtus, with the exception of one clavicle. The shape and size of the bones of the cranium made it necessary to enlarge the wound upon more than one occasion, for the tendency to heal was with difficulty restrained. The bones are now in the possession of the College of Surgeons, and we understand that Mr. CLIFT has bestowed much pains in arranging them.—(*Ibid.*)

Spontaneous Combustion.

MM. COLSON and LELAYE describe a case of spontaneous combustion, which they were ordered to examine by the legal authorities, on the 22d January, 1822. It occurred in the person of the Sieur Vatin, formerly a brewer, aged upwards of sixty years, and who had retired and lived for some time in a state of complete inactivity. The continued abuse of spirituous liquors had so affected his intellects as to dispose him, together with a cancerous ulcer occupying the left side of the face, to the commission of suicide, which he had frequently threatened. He had already some time before attempted to suffocate himself with the vapour of charcoal. He was of a sanguineo-lymphatic temperament, very bulky and tall, and, excepting the above-named ulcer, enjoyed good health. The evening prior to his death he had passed with his friends ; and a woman, who lived in the house, was certain that at midnight he had gone to bed, and extinguished his light. At eight o'clock the next morning, a thick smoke, issuing from the room, raised suspicion in the neighbours ; who, finding the door fastened within, broke it open, and saw the dead body lying on the floor, consumed by a flame, which they extinguished with difficulty, by pouring over it a great quantity of water. The weather was fine, and the thermometer somewhat below the zero. The room was on the ground-floor, spacious, and with a window looking towards the east.

MM. Colson and Lelaye found the body on the floor, a few feet distant from the bed ; a chair, the straw and wood-work of which were burnt, was overturned in the direction of the body, near an iron cauldron, containing a small quantity of charcoal partly consumed : the water poured into this contained a

good deal of fat. The head was attached to the neck, the flesh of which, both behind and at the sides, was destroyed; the face was swollen, and of a dark red colour, as is observed in those who die from suffocation. On the left side, the parietes of the chest, and the whole upper extremity, were consumed, and only carbonised portions of the ribs and humerus were found; and, on the right side, the posterior portions of the ribs, the shoulder, and the arm. The hand, bent upon the epigastrium, was destroyed, as well as part of the forearm, and the transverse apophysis of the dorsal vertebræ on the left side. Of the viscera, the lungs, heart, liver, and spleen, were torrefied, though preserving their form, and, when cut into, affording no blood. There were no vestiges of the other viscera. Other parts of the body were less burned. In the room nothing was burnt, except the charcoal, which had been alight in the cauldron, and which he had purchased the evening before.

MM. Colson and Lelaye ask, how it is possible to account for the destruction of a body of such a size, and in so short a time, otherwise than by supposing that, by intemperance, his organs had acquired the singular property of being destroyed by the contact of an ignited body.—(*Journal Complementaire*, June.)

Helminthology.

M. VIREY informs us that he has received a memoir on the vermifuge powers of the pomegranate bark (*punica granatum*,) from Dr. GOMEZ, who relates fourteen cases of its successful exhibition. Dr. G. presents us also with descriptions of five varieties of tænia, different from those found in the human body in our climate. It is known, in fact, that entozoaries are not the same in all countries, but that they appear to have a preference: the *tænia lata*, or *bothriocephalus latus*, of Rudolphi, is most frequent in the northern regions; the *cucurbitana* is met with especially in Italy, according to Brera; and it is to be presumed that the *filaria papillosa* of Rudolphi is one of the causes of the ophthalmia of Egypt, as a pellucid ascaris has been found in the vitreous humour of the eyes of horses in India. If the figures and description given by M. Gomez are exact, containing the forms of the heads of five tænia he has observed, the catalogue of the species that attack mankind must be augmented. It will be especially necessary with respect to that tænia (No. 6,) which has five orifices in the head,—one central, and four surrounding it. The following are its distinguishing characters:

Pentastoma, capiti oculis quinque munito, articulis brevibus, poro laterali alternante, corpore gracili. Esp. Pentastoma coaretata, articulis alternatim poro laterali unico munitis.—(*Jour. de Pharm. Mai*.)

Rupture of the Umbilical Cord.

M. CHAUSSIER and others having doubted the possibility of the rupture of the umbilical cord by the mere weight of the child, M. A. P. MEIRIEU presents us with the case of a Madame P., thirty-five years of age, in good health, and pregnant with her third child, who was struck by the pole of a coach on the left side of the abdomen, in the eighth month of her pregnancy. She, however, was not taken in labour until the conclusion of the ninth month, and was brought to bed of a female child. A few moments before this event, Madame P. was walking about her room, and was seized with a strong pain; she took firm hold of the bed-post, brought herself nearer to the ground, retained the infant by means of her clothes, and placed it gently on the floor: the whole was the affair of an instant. One of the assistants took the child, and found the umbilical cord broken. This was before the arrival of Dr. Meirieu, who, on examination, found not the slightest traces of contusion on the child: it had, however, a spina bifida, occupying the lower part of the loins and the upper part of the sacrum. The umbilical cord was separated about four inches from the ring, and the end drawn out to a point.—(*Journal Universel*, Mai.)

Dobereiner's Analysis of Oxalic Acid.

M. Dobereiner finds, that oxalic acid contains no hydrogen, but is formed of equal volumes of oxide of carbon, and carbonic acid combined with water, the water being essential to the acid. For when it is exposed to fuming sulphuric acid, like that of Nordhausen, whose affinity for water is very great, the acid disappears, and a gas is produced 9.4 cubic inches of which contains 4.7 cubic inches of carbonic acid gas, and the remainder is oxide of carbon. If there had been hydrogen present, sulphurous acid would have been formed, or the carbonic acid, and carbonic oxide, would have been in different proportions.—(*Annales de Chimie et Physique.*)

Montague's Case of Pulmonic Disease in a Duck.

Our late distinguished and indefatigable naturalist, George Montague, esq. had a scaup duck sent to him, which appeared to be sickly, and died in a few days. On dissection he found extensive disease of the lungs, and the membrane surrounding them much thickened, apparently from chronic inflammation. But what was most remarkable, the whole cavity of the thorax where the disease prevailed was covered with *mucor*, or blue mould, affording a singular example of a vegetable growing within an animal. It is to be remarked, however, that the parts where the fungus grew were in a complete state of decay.—(*Edinburgh Encyclopedia.*)

This singular case forms a good illustration of the observations of M. Gaspard in Magendie's Journal, to which we have alluded above.—*Quart. Jour. For. Med.* IV. 230.

Taddei's New Antidote to Corrosive Sublimate.

Professor Taddei, of Florence, has published an octavo pamphlet, proposing the gluten of wheat as a new antidote for that dreadful poison the oxy-muriate of mercury. We have not yet seen it, but there is a very full analysis of it by A. Cattaneo, in Omodei's Annals, minutely describing the origin of the discovery; the mode of preparing and administering the gluten, in which there seems to be nothing peculiar; experiments with it on animals; and a comparison of its efficacy with that of albumen, as proposed by Orfila. Taddei concludes his pamphlet with recommending the now almost disused corrosive sublimate in syphilis, care being taken to modify its effects by drinking largely of milk, barley water, and decoction of mallows, or burdock.—(*Annali Univ. di Medicina*, vol. XVII.

Alteration of the Anterior Part of the Spinal Marrow, observed at the Hospital of Charenton. By M. ROYER COLLARD.

Sprevale, born at Salmes, in Piedmont, April 18, 1760, on the half-pay of the fifth demi-brigade of veterans, entered the hospital of Charenton October 17, 1806, and died March 3, 1823.

No information can be obtained as to the situation of this man before he entered the hospital: during the first ten years of his residence there he remained silent, idle, liking nothing but his bed, scarcely answering the questions that were asked him; his walk was unsteady, his lower extremities were tottering, his upper ones were free, his pulse was feeble and slow. His apathy sometimes left him, and he became peevish and mischievous, endeavouring to strike at all whom he met. The pelvic extremities becoming more and more feeble, he was at length unable to walk, and he remained about seven years with his thighs bent upon the pelvis, and the legs upon the thighs "without ever moving these parts, which nevertheless retained their sensibility." He still understood what was said to him, but his answers were not articulate;

his intellectual faculties were almost annihilated, and he lived only to drink, eat, and occasionally to fly in a rage. His excretions were made involuntarily. Three weeks before his death he was taken with a looseness, which became more and more abundant; his pulse was almost insensible; his emaciation was extreme. The trochanters and the perineum soon became excoriated.

Appearance after Death.—The skull hard as ivory, and three times as thick as when in a healthy state; the cerebral and spinal dura mater is thickened, but not injected; the arachnoid is healthy throughout.

The pia mater of the brain presents nothing remarkable; "that which covers the corpora olivaria and pyramidal eminences, as well as the anterior faces of the spinal marrow, is very dense, of a bluish colour, and marked with dots. This colouring is bounded on each side by the anterior roots of the spinal nerves and the dentated ligament; above, it insensibly diminishes on the developement of the cerebellum, on the upper edge of which no trace of it is seen; below, it finishes with the spinal marrow. This membrane being taken away, the olivarian and pyramidal bodies are found of a greyish colour, and as soft as bouille; the softness continues but gradually diminishes along the whole anterior part of the marrow, and almost through the whole thickness of the bundles of fibres which form it;" towards the encephalon it may be traced across the commissure of the cerebellum into the crura of the brain, the optic thalami, the striated bodies, and some of the cerebral convolutions, particularly towards the middle part of the right side. The anterior roots of the spinal nerves can also be distinguished on the fasciculi which give them origin, but they have not their accustomed consistency.

All the other parts of the brain, besides those which we have mentioned, are, as well as the cerebellum, in their natural state; but the commissure of the latter is more firm than ordinary, and affords a striking contrast with the softness of the neighbouring parts.

The posterior face of the spinal marrow, and the membrane which covers it, are sound. There is nothing to be remarked in the breast; a little serum is effused in the abdomen, and some light red spots exist on the peritoneum: the internal membrane of the stomach is bluish, dotted almost throughout its whole extension; that of the intestines presents some red spots.

The pelvian members cannot be extended, (thirty hours after the patient's decease the thoracic members became flaccid;) after cutting the muscles which move them, they were rendered moveable. There is much synovia in all their articulations.

M. Magendie inquires, is not this case calculated to enlighten our views respecting the distinct properties of the anterior and posterior parts of the spinal cord? However, it should be added, that the movements of the arm in this case were partly preserved; the writer of the case says they were not, but M. Royer Collard informed M. Magendie, verbally, that they were. However, this last circumstance shows the necessity of a further examination of the anatomy of the spinal cord and of its vital phenomena. This part of the nervous system is much more complicated at its superier region than any where else, and we know nothing of the functions of the corpora olivaria, of the anterior and posterior pyramids, &c. M. M. is at present investigating these points.—*Journal de Phys. Avril 1823.*

On the Employment of Belladonna in various Diseases. By POWELL CHARLES BLACKETT, Esq., Member of the Royal College of Surgeons, London.

Having employed the atropa belladonna with great advantage in several nervous and inflammatory disorders, I am desirous to draw the attention of the readers of the *REPOSITORY* to the subject. The particular preparation of this medicine, which I have been in the habit of using, is a very strong tincture made from the extract in the following proportions: take ten drachms of the most carefully prepared extract of belladonna and one pound of proof spirit, macerate

for fourteen days, and then filtre. I endeavoured to procure the extract in a state of its greatest activity, and possessing the virtues of the plant undiminished in the preparation, and I consequently find a single drop of the tincture which is made from it to be more efficacious than a quarter of a grain dose of the extract, as it is usually obtained from druggists.

I have frequently employed this tincture in cases of mania, in various forms of convulsions, in hysteria, and in pertussis, with decided efficacy. In all cases of its internal use, I have commenced with small doses, generally with two or three minims in the day. I have been led to embrace this cautious mode of commencing the remedy, because I have found that when given at first in a larger dose, owing to peculiar states of the constitution, especially in old subjects, it sometimes depresses the powers of life to a greater extent than was wished. The rapidity with which I have increased the dose, or the extent to which I have carried it, has always been regulated by its effects, by the circumstances of the case, and by the constitution of the patient; always keeping it in mind, that its effects occasionally are not very marked for some time, when they suddenly evince themselves in a very decided manner; thus showing that in some instances, it does not act upon the nervous system until its exhibition has been carried to a certain extent, when its effects are quickly expressed throughout the whole frame.

In several forms of cutaneous or superficial inflammation, I have experienced the greatest service from the external use of this tincture, either when added to a lotion, or to any ointment which appeared most suitable, in other respects to the particular nature of the case. When I have employed it in a lotion, a drachm of the tincture to eight ounces of the liquid has been the proportion adopted, and in this form I have found it very beneficial in external inflammations and in irritable ulcers.

I have used the extract either alone, or combined with some ointment, with decided advantage, in spasmodic stricture of the rectum; and I have found it useful in gonorrhœa, especially when chordee was present, when conjoined with double the quantity of mercurial ointment, and rubbed along the course of the urethra. Without offering more general remarks on the use of this narcotic, I shall conclude with the particulars of a case of mania in which I gave it with advantage, after other modes of treatment had failed in accomplishing a cure, although they may have acted beneficially in disposing the system of the patient to the influence of the belladonna.

5th March, 1819.—C. G., aged forty-eight, of a pale complexion and spare habit, who had been accustomed to a very active life, became, in consequence of repeated misfortunes in business, the subject of mental derangement, in the form of melancholia, and being of a religious disposition, his mind was constantly filled with apprehensions of his future state. I saw him about two weeks after these commencing symptoms of derangement, when he had all the actions of a furious maniac. His bowels were constipated; his tongue foul; urine in small quantity, and of a high colour; pulse 86; skin dry and hot. He complained of pain at the scrobic. cordis. After subjecting him to the usual mode of coercion, a course of purgatives, combined with anodynes and occasional injections, was entered on, general and local blood-lettings were employed, and blisters applied to the nape of the neck. This treatment, which was varied according to circumstances, and conjoined with various internal remedies, was continued until the 5th of April, when I resolved to employ the belladonna, from the circumstance of my having used it with success in four cases of a similar nature; it was prescribed in the following manner:—

R Mist. Camphoræ, ℥vss.

Tinct. Belladonnæ, ℥ij.

Liquor. Antim. Tart., ℥iij. M.

Capiat cochlear. dua ampla, sextis horis.

April 6th.—The symptoms were much the same as before, but he had passed a considerable quantity of urine. A draught, composed of camboge and infusion of senna, was ordered, on account of the confined state of his bowels, and directed to be repeated when circumstances required it.

10th.—The urine was greatly increased; and the symptoms of derangement were not so violent. His bowels were natural; his tongue clean; his pulse at 76, and regular. He was directed to take *three* table spoonfuls of the mixture every four hours.

17th.—He has passed the nights in a more composed state, and has enjoyed some lucid intervals. Pulse 70; tongue clean; bowels regular; the pupils of the eyes rather dilated.

R Mist. Camphoræ, ℥viijss.
Tinct. Belladonnæ, ℥iv.
Acid. Citrici, ℥j. M.

Capiat cochlear. tria magna quartâ quâque horâ.

20th.—The pupils are quite dilated, and attended with loss of sight, and a great propensity to sleep. The countenance was rather flushed, but all the symptoms of mental derangement had left him. His pulse, tongue, and bowels, were natural.

The belladonna was discontinued for seven days, when his sight returned. His countenance was quite calm and cheerful. The following mixture was now used:—

R Aquæ Menthæ Viridis, ℥viij.
Tincturæ Belladonnæ, ℥ij.

ft. mist. cujus capiat cochlearia tria magna, nocte manequæ.

This mixture was continued for three weeks, and an aperient draught given occasionally. He has continued well from that period up to the present, without the least appearance of a relapse.

From the experience I have had of this remedy, I consider that we cannot expect much benefit from its internal use until it has nearly produced a temporary loss of sight.

Park Street, Grosvenor Square, April 11th, 1823.

Case of Rupture of the Œsophagus, with Perforations of the Stomach, supervening to an acute Disease of this Organ. By M. BOUILLAUD, élève interne, at the Hospital Cochin.

Pierre-Louis Parechant, aged twenty years, of a large form, but of a pale and nervous aspect, was received into the Hospital Cochin on the 8th of March, 1822. He had suffered, during the six previous weeks, from pain in the stomach, increased after a meal and during the night; had muscular feebleness, with tremblings; and, when a child, had been affected by a purulent discharge from the right ear. On his admission, he had been bedridden only four days, and, at that time, presented the following symptoms: the tongue rather red, and very moist; loss of appetite; thirst; constipation; the region of the stomach hot and painful; pulse frequent and sharp; occasional rigors; sub-orbital headach; slight delirium through the night. *Sweetened gum-water, thirty leeches on the epigastrium, lavements, antiphlogistic diet.*

The patient appeared relieved by this treatment: but, for the first time, vomited once spontaneously.—On the 9th of March, his pulse was full, frequent and large. *Bled once from the arm.*—On the 10th, 11th, and 12th, the retchings continued. The pulse was still full, strong, and frequent.—13th. He trembled greatly in the morning, and on endeavouring to get up staggered and was unable to sustain himself. He lost his speech, stammered a few unintelligible words; could not seize objects with his right hand; his face was

pale; mouth drawn to the left side; pupils dilated, but mobile. *Bled from the arm, a purgative lavement.*—14th. Epistaxis: he could comprehend questions, but not answer them; was impatient, agitated, and tossed himself under the bed-clothes. *Bled from the foot, blisters behind the ears.*—15th. The agitations alternated with faintings; sighed and moaned frequently; the pulsation of the heart was very strong; heat of skin.—17th. Squeezed my hand forcibly with that which was paralyzed; sighed profoundly.—18th. Total loss of recollection; countenance contracted; the pupil large; pulse 150: death at nine o'clock.

Dissection twenty-four hours after death. The limbs rigid. 1st, *Head.* Injection of the meninges; the lateral ventricles were distended with a great quantity of turbid serum, approaching a milky hue; the cerebral tissue rather soft. 2d, *Thorax.* Gas escaped on opening the left cavity of the chest, the corresponding lung being slightly pressed upwards; the cavity of the pleura contained about four ounces of a reddish-brown fluid; the pleura was injected, and covered with red spots. *The œsophagus, a little above the cardia, and to the left side, presented a perforation of the size of the finger's-nail; and a little higher a rupture an inch and a half in length, through which the liquid just described had escaped into the left cavity of the chest, and which was nothing else than part of that contained in the stomach, mixed with blood.* The right side of the thorax presented nothing particular. 3d, *Abdomen.* On opening the abdominal parietes, some gas and a quantity of liquid matter contained in the peritoneal cavity escaped. The stomach presented, in its splenic region, *four perforations, disposed in such a manner as to form the four angles of a parallelogram; the largest of which was of the size of a centime, and the others were smaller and smaller.* The mucous membrane was destroyed by ulceration to a much greater extent than the serous, which probably was torn by the retchings. The mucous membrane of the stomach was red and injected throughout. The portion of the peritoneum, in contact with the liquid effused through the perforations, was injected. The mucous membrane of the small intestines, of the cæcum, and colon, was also injected, but entire.—*Archives, Mai, 1823.*

Case of Rupture of the Stomach, supervening to a Cancerous Affection of this Organ, during the Efforts at Stool. By M. BOUILLAUD, &c.

Antoine Botte, aged sixty-one years, was received into the Hospital Cochin, on the 23d of February, 1822, with symptoms of a cancerous affection of the stomach, combined with pulmonary disease. The stethoscope gave the report of ulceration when applied at the top of both sides of the thorax. However, there was no symptom that announced immediate dissolution; when, seven days after the entrance of the patient into the hospital, I was called to him at one o'clock in the morning. He had got up in order to go to the night-stool, and after some fruitless attempts, he at once lost all recollection. I found him in the following state: countenance pale and inanimate; the eyes dull and obscure; pulse could not be felt; skin cold, and, with the countenance, covered with a cold sweat; respiration slow; no answer to questions; death shortly after.

Dissection.—Both the lungs were tuberculated, and excavated at their summits by large fistulous ulcers filled with tuberculated matter, and each was lined with two membranes, of which the deepest seated was red and adherent to the pulmonary tissue. On opening the abdomen, a great quantity of dirty, liquid, and muddy matter escaped. The peritoneum presented a very red and punctuated appearance where it was in contact with the effused matters, which resembled that contained in the stomach. This organ presented, at its pyloric region, near the small curvature, a *perforation* about the size of a half-franc piece, of which the margins were regular and thickened, and divided at the expense of the mucous coat. This perforation embraced, at one extremity, a

large ulceration of a parabolic form, circumscribed by a border projecting in the manner of a pad or roll. The bottom of this ulceration was formed by the pancreas, whose anterior surface adhered to the whole circumference of the projecting border just mentioned. The perforation was precisely in that situation where the pancreas terminated, and ceased to furnish the substituted paries to the disorganized portion of the stomach. The pyloric ring extended into the border which circumscribed the ulceration, and was white, pearly, and compact. On the rest of its internal surface the stomach presented several red patches, as if spotted with blood, which could not be removed by repeated washing. The pylorus was considerably contracted. Nothing particular was observed in the intestines or in the brain.—*Archives, Mai, 1823.*

Hæmorrhage from one of the Fallopian Tubes, speedily becoming fatal. By M. GODELLE, M. D. Soissons.

A female, while suckling, became the subject of a violent paroxysm of anger, a few hours after which she was seized with severe colicky pains, accompanied with retchings and very frequent stools. The abdomen soon afterwards became hard and tumid; the pains more violent; and cold perspirations, hiccup, syncope, and death, supervened within nine hours from the first attack of pain. The body had been interred; but owing to a report that the individual had been poisoned by her husband, exhumation was ordered, and the body inspected.

Dissection.—The head and thorax presented nothing remarkable. The abdomen, which was tumid, contained within its cavity more than eight pounds of blood, separated into clots of coagulum and a reddish serum, and situated chiefly in the hypogastrium, between the bladder and womb on the one side, and the small intestines on the other. The mucous membrane of the digestive tube was particularly examined from the mouth to the anus; it presented no marks of disease, excepting a slight redness at one point, in the small intestines, where two prune-stones were lodged. An oblong perforation, with irregular and torn-like margins, about an inch in circumference, was discovered in the texture of the right Fallopian tube: this opening was surrounded by a reddish areola, the rays of which extended about three lines from the margin of the perforation. The rest of the peritoneum was examined with the most scrupulous attention, and it did not appear that it could have permitted, at any other point, the escape of the smallest quantity of blood, not even by means of transudation, as it retained, throughout its extent, its natural character. The uterus possessed a blanched appearance, and was altogether exsanguineous: it contained about half an ounce of mucus, but not a drop of blood.—*Ibid. Mars. 1823.*

Case of Tumor of the Brain. By M. DUPAREQUE.

A female, of a strong constitution, of an ardent temperament, and of strong passions, at the age of thirty-eight, and after a life of frequent change from the utmost distress to the greatest and most warmly felt pleasure, became suddenly sedentary, owing to the death of her husband. She was afterwards seized, in a manner more or less continued, with violent pain in the posterior and superior part of the head; occasionally accompanied with a state of coma, from which she was frequently roused by violent spasmodic contractions of all the muscles of voluntary motion, attended with insupportable pain. At the age of forty, these symptoms had become much increased; she had lost her memory; and from a state of high delirium had sunk to idiocy. After a sudden and unexpected melioration of her symptoms, which, however, was of short duration, she became apoplectic, in which state she died on the second day.

Dissection.—Two ounces and a half of limpid serum were found in the left ventricle of the brain; an equal quantity, more turbid, and possessing a reddish colour, was in the right ventricle, the posterior part of which contained

a body having the form and size of a pullet's egg, presenting a bluish-red colour, and apparently intimately connected with the plexus choroïdes, to which it adhered, as well as to other points of the cavity, by means of fine vascular filaments. The internal structure of the tumor had the closest analogy in appearance to a piece of hepaticized lung.—*Nouv. Bibl. Med. Jan. 1823.*

OBITUARY.

It becomes our painful task to announce, since the date of our last Number, the loss of our highly esteemed and valuable friend, Dr. SILAS GEORGE, of Harrisburg, Pennsylvania. He died on the 15th of August last, after a short illness, induced, probably, by fatigue and exposure in the prosecution of an extensive practice, to which his constitution was inadequate.

In the death of Dr. George, society has lost a valuable member, and our profession a most zealous and promising practitioner. Scarcely arrived at the meridian of his days, and possessing a mind highly improved by diligent research and observation, he bid fair to fulfil the most flattering anticipations of his friends, as well in the advancement of medical and scientific knowledge, as in the cultivation of the social duties of life.

Dr. George was a graduate of the University of Pennsylvania.—He died in the 29th year of his age.

MEDICAL INTELLIGENCE.

[The following modification of the counter-extending band in the apparatus of Desault, completely relieved the uneasiness occasioned by excoriation, and permitted counter-extension to the degree necessary to prevent shortening of the limb. We are indebted for it to Dr. JOHN BASKIN, through Dr. E. A. ATLEE.]

The direction of the counter-extending band was changed by passing it over the groin and under the nates of the right side, (the left thigh being fractured) obliquely upwards and outwards, as far as the spine of the ilium. I then passed a handkerchief round the haunch of the right side, between it and the two sides of the counter-extending band, then by reverting its ends brought them together and knotted them firmly, enclosing in it the two sides of the counter-extending band distant from each other about ten inches, (the patient being an adult); the counter-extending band was then carried obliquely upwards to the left side, (the one end over and the other under the body of the patient,) and secured it by passing it through the holes in the splint in the usual manner; but nearer the axilla. By this direction of the counter-extending band it forms an angle about the spine of the ilium, the centre of which is the handkerchief or band passed round the haunch and uniting the sides thereof. Should it occasion uneasiness by pressure on the abdomen, it may be obviated by increasing the breadth of the long splint immediately under the axilla where the band passes through it. This modification of the counter-extending band will do away another objection, urged against the treatment by permanent extension by its opposers, viz. the lateral displacement of the bone when the fracture is situated about its neck, as the force of the band is directed against the sound thigh, while the resistance to the shortening of the limb is complete.

We are informed that the Society of Arts in London have been pleased to honour Mr. Amesbury, Surgeon, with a valuable gold medal in token of the high opinion they entertain of the effects of his apparatus in fractures, &c. of the lower extremities.

We are also informed that Mr. Amesbury is preparing for publication, an Essay on the treatment of fractures of the humerus, wherein he will describe an apparatus which will be found calculated to prevent deformity and non-union after fractures of that bone. Mr. A. has used it in several cases, (one of which had existed ten months,) in each its effects were perfectly successful within six weeks from the time of its first application.

[The following publication is admitted to support the credit of this Journal, which shall always be devoted to truth and the extension of the science of Medicine, as also to give an opportunity to the profession of defending itself against dangerous reports. It is not necessary to state that the Journal is open to an appropriate reply from the other party, each being responsible for their respective statements.]

Additional Observations on the case of James Underwood, reported in the 4th vol. of the Am. Med. Recorder, by HORATIO G. JAMESON, M. D. Surgeon to the Baltimore Hospital.

I had the honour of communicating in the 4th volume of this Journal the case of James Underwood, in which an extensive tumor was removed successfully from the superior jaw. Several highly respectable members of the profession were present, who could testify to the accuracy of my report of that operation. Notwithstanding its termination was honourable and highly important to the profession; the responsibility which I incurred, great; the method by which I attained my object, and also my operation and treatment, were new; Mr. Pattison, Professor of Surgery in the College of Baltimore, has on different occasions, endeavoured to lessen the importance of the case; has made me the subject of private remark, and has arraigned me before his class, stating that my report was incorrect, &c. I know of no channel by which I can expect to receive satisfaction, otherwise than through the Journal through which the original communication was made. Explanation has been demanded of Mr. Pattison and he has refused to reply. To overlook the past, would in my opinion only lead to further aggressions—to resort to newspaper publications or personal attack, would degrade the profession.

On the 9th of last April, a physician of high standing in this city (whose name it is not necessary to use at this time) told me in the presence of two medical gentlemen, one of them a stranger, that Mr. Pattison had once told him "that he, Mr. Pattison, had visited Underwood and that the tumour was returning, that the operation would terminate in Jameson's disgrace, and that he had been anxious to have obtained the case." It is not pretended that these are the precise words, but such was their import. Believing that it was wrong for me to suffer a declaration so publicly made to pass unnoticed, as well from the pointed manner in which my veracity had been impeached, as from the belief that if Mr. Pattison had been using such language that I had a rational ground for drawing the conclusion that to this source might be traced all the reports respecting the reproduction of the disease, &c. I therefore addressed the following note to Mr. Pattison through the post office the day after the above conversation.

Baltimore, April 10th, 1823.

SIR, I was told yesterday in company by a gentleman of high standing, that you once made the following observations to him—the time when they were made will appear on the face of them. I had heard similar tales about that time,

but considering them mere rumours, I did not think them worthy of notice; they have assumed a more serious aspect, and I trust you will not hesitate to avow or disavow through any channel you may think proper, by a written answer, whether you did or did not use such language.

"I have visited Underwood and find the tumor returning—the case will terminate in Jameson's disgrace—the operation was imperfectly performed—I was anxious to have obtained the case," are the amount of your remarks—the precise phraseology is not recollected.

Yours, &c.

HORATIO G. JAMESON.

PROFESSOR PATTISON.

To this I received no answer.

I conclude by subjoining the following certificate from the parents of the patient.

CERTIFICATE.

In consequence of various reports, which have a tendency to mislead the public in regard to an operation performed on our son James Underwood by Dr. Jameson, we feel it a duty we owe to the community as well as to the reputation of the surgeon who was the instrument under Providence of preserving the life of our son, to state—that when he was labouring under a most distressing affliction of a tumor, &c. &c. Dr. Jameson was applied to for advice, and after a deliberate examination gave as his opinion, that he could operate successfully; but not willing at that time to rely on the judgment of one surgeon alone, advice was taken from all the respectable surgeons in Baltimore, who gave it as their opinion that an operation would prove fatal, and that his disease was of such a nature that no remedy could save him.—Under these discouraging circumstances we had our son conveyed to Philadelphia, and the best medical advice of that city was obtained, but no surgeon was found who would undertake an operation with any assurance of success. Our son returned hopeless of obtaining any relief from surgical aid. In the mean time, Professor Pattison of the University of Maryland called twice to see him, at the request of a friend who had kindly taken charge of the case,—he having but lately come from Europe, and report stating him to be a man eminently skilled in the surgical profession, we thought much reliance might be placed on his judgment, and accordingly asked his opinion, and whether he had ever seen any case like the one before him—he replied with much apparent candour and frankness, that he had seen several cases in Europe similar to that of our son—that they had invariably terminated fatally—in one case the patient had been operated on, and died soon afterwards—and he stated as his candid and best opinion that our son could not survive an operation, and that his case would speedily terminate in death.

We have also heard it stated that Dr. Jameson after the operation had neglected to give that attention to the patient that the case required, and that the patient had died in consequence of the tumor growing again. From a sense of duty we deem it necessary to state that Dr. Jameson's attention after the operation was the most unremitting and feeling. And we believe it will satisfy all of the complete success of the operation, when we state that our son now possesses, and has possessed, for the last two years, good health, and that he is entirely free from any pain or inconvenience arising out of the disease, and that he pursues his business with as much comfort as he ever did.

We cannot conclude this article without expressing our acknowledgements, &c.

ENOCH UNDERWOOD.

MARY UNDERWOOD.

18th 6th Mo. 1823.

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